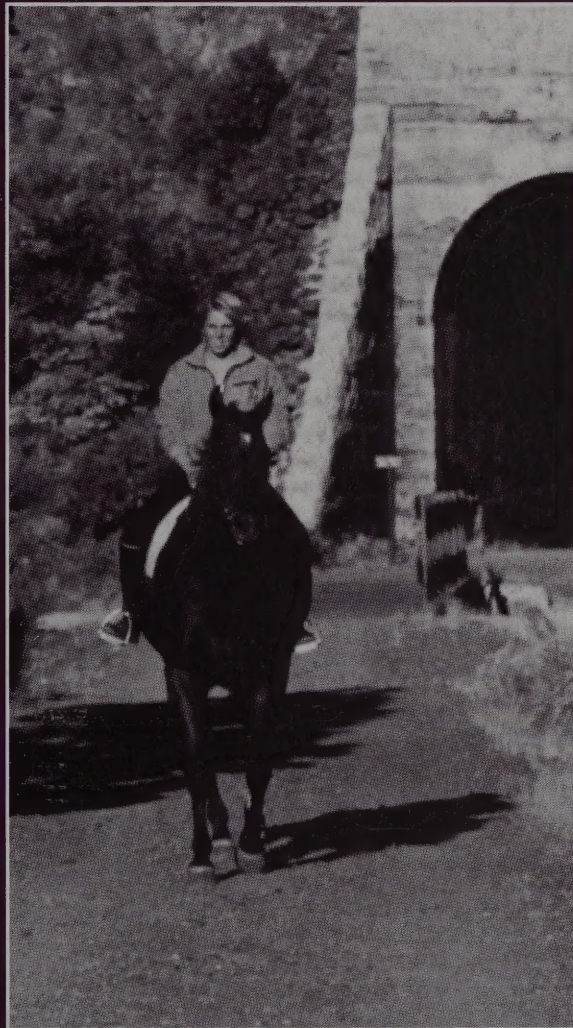
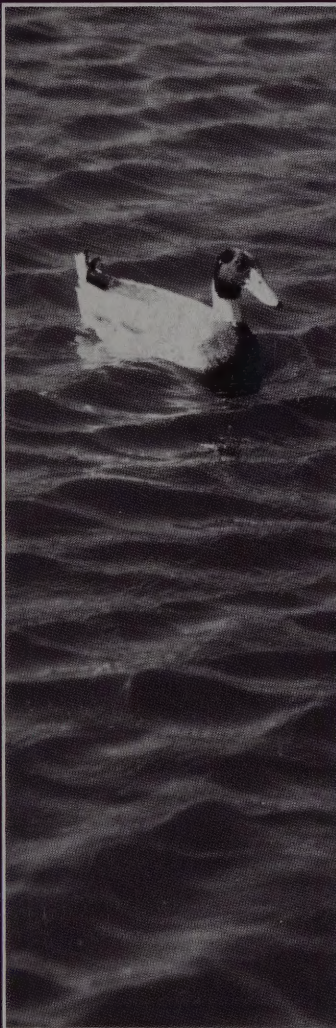


**BLM**

Meeting the Challenge in 1991



*Recreation 2000, Fish & Wildlife 2000,
Riparian-Wetland Initiative for the 1990's*

.....

Progress Report On Implementation of Three Initiatives

JK
868
.M44
1992
c.3



U.S. Department of the Interior • Bureau of Land Management



36383054 10188077140 JK 868 .M44 1992 C.3

Meeting the Challenge in 1991

*Recreation 2000, Fish & Wildlife 2000
Riparian-Wetland Initiative for the 1990's*

.....

Progress Report On Implementation of Three Initiatives

U.S. Department of the Interior • Bureau of Land Management

BLM-WO-GI-92-003-4333



Printed on Recycled Paper

1B: WO-92-550, attach 1





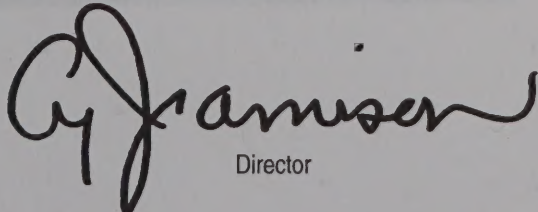
To Secretary of the Interior Manuel Lujan, Jr.

This is a report on the accomplishments of three Bureau of Land Management (BLM) initiatives that support the Interior Department's stewardship and outdoor recreation agendas. These reports, *Recreation 2000*, *Fish and Wildlife 2000*, and the *Riparian-Wetland Initiative for the 1990's*, comply with the Fiscal Year 1991 directive of the House Subcommittee on Interior Appropriations, which requested the BLM to assess the progress and problems in implementing these three initiatives.

This report exemplifies the BLM's recent shift toward a more balanced approach to public lands management. This approach seeks to make the resources available to all Americans by increasing recreational opportunities on the public lands, focusing on efforts to restore and protect vital wildlife and riparian areas, and ensuring the public lands continue to provide needed natural resources in an environmentally sound manner. I call this the "New BLM," and I am personally committed to its goals, all of which support the Interior Department's commitment to improved stewardship of the lands entrusted to us.

Recreation 2000, *Fish and Wildlife 2000* and the *Riparian-Wetland Initiative for the 1990's* are already answering the call for increased recreational opportunities, protection, and wise use of the Nation's public lands and natural resources entrusted to the BLM. Volunteers are giving their time and talents in record numbers to see that these initiatives succeed, and partnerships have been formed with a number of organizations across the country who are committed to a national stewardship ethic.

There is still much to be done, and complete success will take many years. But 1991 has shown that with the support of Congress and the American people, we can succeed in meeting the ambitious goals we have set.



Director

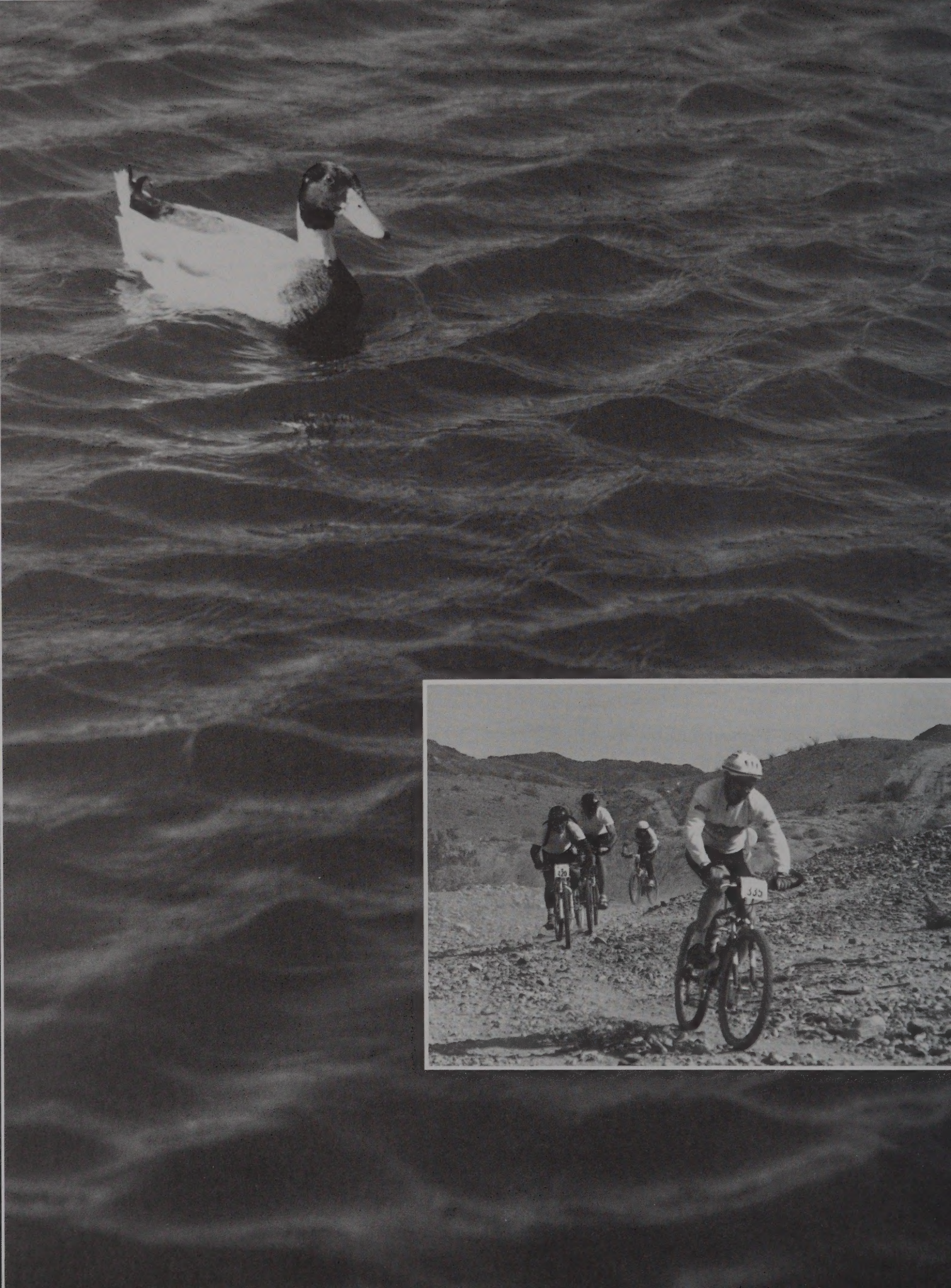
Recreation, Fish & Wildlife, and Riparian-Wetland Resources on BLM Lands

301 Special Recreation Areas	1,749 day use sites and 5,552 campsites
15 million acres in 6 National Conservation Areas and 1 National Recreation Area	487 boating access points
6 million acres in 161 recreation related Areas of Critical Environmental Concern	30 visitor information centers
32 National Wild, Scenic, and Recreational Rivers stretching over 2,000 miles.	19 concession operations
2 million acres in 162 established natural areas	2.4 million acres of lakes and reservoirs
171 thousand miles of fishable streams	1.6 million acres in 66 Wilderness Areas
6 thousand miles of hiking trails	129 thousand historic and archaeological sites
22 National Recreation, Scenic, and Historic Trails reaching a total of 2,000 miles in length	8.7 thousand miles of floatable rivers
44 Back Country Byways	159 wildlife viewing sites
65 thousand miles of all-terrain vehicle roads including thousands of miles of primitive roads	233 million acres of small game habitat
554 developed recreation sites, including	206 million acres of big game habitat
	24 million acres of riparian and wetland areas
	182 thousand miles of riparian streams
	35 thousand acres of National Riparian Conservation Areas

Note: Some numbers are rounded

Table of Contents

Executive Summary	1
Recreation 2000	11
Introduction	11
Goals	13
Implementation Priorities and Progress 1989 through 1991	14
Recreation 2000 Accomplishments	24
Future Challenges	35
Fish & Wildlife 2000	37
Introduction	37
Goals and Objectives Implementation Progress	38
Partnerships	53
Human Resource Management	55
Showcase Habitat Management Areas	60
Showcase Areas	61
Future Challenges	67
Riparian-Wetland Initiative for the 1990's	71
Introduction	71
Goals and Strategies 1991 and Beyond	75
Implementation Priorities	76
Actual Progress, Accomplishments in 1991	77
Future Challenges	91
BLM'S Riparian Management Policy	93
BLM State Offices	94



Executive Summary

The Bureau of Land Management (BLM) oversees the Nation's largest system of public lands, covering more than 270 million acres. BLM-administered lands cover a broad spectrum of America's landscape, from rangelands to coastline, alpine meadow to sand dune, slick rock canyon to dry lake, raging river to subterranean cave.

This Executive Summary highlights individual reports on 1991 accomplishments in three key BLM programs, *Recreation 2000*, *Fish and Wildlife 2000*, and the *Riparian-Wetlands Initiative for the 1990's*.

Adding to traditional uses of BLM lands, such as livestock grazing, mining, and timber production, these programs are vital components of the BLM's "multiple use" mission of managing, protecting, and improving public lands to serve the American people for all times.

The BLM's Recreation program seeks to provide increased recreational opportunities on the public lands for all Americans. The BLM's Fish and Wildlife program seeks to improve and manage habitat for the tremendous variety of

species found on the public lands, while the Riparian-Wetlands program seeks to restore and maintain ecologically rich areas bordering creeks, rivers and lakes in the Western United States.

Shared Objectives

Although presented through three independent reports, these programs are integrated, as some components of one may support the goals of another. For example, *Fish and Wildlife 2000* contains a separate riparian objective, as most fish and wildlife species in the Western United States depend in some way on a healthy riparian ecology. In addition, many popular recreation activities, such as boating or camping, are focused on riparian-wetland areas. Some forms of recreation, such as birdwatching or fishing, involve fish and wildlife resources. These programs do not exist independently, but rather they are managed together in many cases to meet common goals.



Recreation 2000

The BLM provides more opportunities for recreation than any other single Federal or State agency. Examples include hiking, camping, biking, skiing, touring, whitewater rafting and even hang gliding. The purpose of the *Recreation 2000 Initiative* is to update and energize the BLM's Recreation Management Program and to accomplish more effectively its multiple-use objective. The principal goal of the BLM's recreation policy is to ensure the availability of public lands for a variety of outdoor activities.

By following the blueprint of *Recreation 2000* and its implementation plan, the BLM is becoming substantially more responsive to visi-

tors' needs and better known for its commitment to the protection and management of natural resources on public lands.

The BLM has made major strides in implementing *Recreation 2000* since its inception in 1989. The agency's goals are to improve information and interpretive services to visitors; protect essential recreation resources; publicize the BLM's recreation management and support programs; forge Federal, State, local and private partnerships to distribute information about

*The principal goal of
the BLM's recreation policy is
to ensure the availability
of public lands for
a variety of outdoor activities.*

recreation opportunities; and expand public outreach initiatives. Recreation programs were budgeted at \$22 million in 1991, and \$25 million in 1992.

Through *Recreation 2000*, the BLM has:

- Implemented a prototype computer information service which delivers information on the BLM's recreation programs to more than 2.4 million home computer users and 70,000 travel agents.
- Built handicapped accessible picnic and fishing sites such as one near Miles City, Montana. The site features more than 1,700 feet of concrete trails, a parking area with a wheelchair ramp and wheelchair-accessible picnic tables.
- Completed a land exchange in BLM's Prineville District Office in Oregon that brought a block of more than 52,000 acres of private land into public ownership. Other land acquisitions for recreation include 4,100 acres in Colorado; and 156 acres in Utah at the Cisco takeout on the Colorado River, assisting public use of Utah's best place for an overnight whitewater river trip, used by over 10,000 river runners per year.
- Made significant progress in providing visitor information and protecting and monitoring resources, improving access, increasing the use of partnerships and volunteers, bolstering tourism programs, increasing construction where appropriate and improving maintenance of facilities.



Fish and Wildlife 2000

More than 3,000 species of mammals, fish, birds, reptiles and amphibians live on the public lands managed by the BLM, including all North American native species of big game, quail and grouse. Eighty percent of the remaining habitat for desert bighorn sheep is on BLM-managed land.

The BLM's *Fish and Wildlife 2000* initiative seeks to improve the management of fish and wildlife habitat on all BLM-administered public lands.

With *Fish and Wildlife 2000*, the BLM is

- Promoting a diversity of wildlife on public lands by restoring, maintaining and enhancing habitat.
- Expanding opportunities for the public to watch wildlife on public lands.

- Improving the management of habitat for fish species that spend all or part of their lifecycles on public lands, including bass, and rainbow and cutthroat trout.
- Protecting threatened and endangered species of wildlife, fish and plants by improving habitats and by stepping up inventories. More than 162 species of animals and plants found on public lands are considered threatened or endangered.

Under *Fish and Wildlife 2000*, the budget for fish and wildlife habitat management has doubled — from \$16.3 million in Fiscal Year 1987 to \$34.1 million in Fiscal Year 1992. Of the total, the BLM allocated \$7 million in 1991 for the protection of threatened and endangered species.

Through *Fish and Wildlife 2000*, the BLM has:

- Launched a 12-year program to increase the production of adult salmon and steelhead by 172,000 fish annually in Idaho, Oregon, California and Alaska.
- Sponsored 30 National Fishing Week events in 1991, attracting nearly 3,700 participants.
- Worked with Federal and State agencies, along with four national conservation groups, to establish 159 wildlife viewing sites on Federal and State lands.
- Established 115 new water sources for desert bighorn sheep and reintroduced bighorns into 39 new habitat areas.
- Reintroduced elk into the Peavine Mountain Area in Oregon's Medford District.
- Increased monitoring of the northern spotted owl.



Riparian-Wetland Initiative for the 1990s

The BLM's *Riparian-Wetland Initiative for the 1990's*, a product of the Interior Secretary's ambitious resource stewardship agenda, was developed to protect watersheds and to provide the widest diversity for plants and animals. The program complements other BLM initiatives, such as *Fish and Wildlife 2000* and *Recreation 2000*.

Riparian-wetland areas constitute 23.7 million acres, or 8.8 percent of the 270 million acres of public lands managed by the BLM. Riparian areas are lands adjacent to lakes, creeks, streams and rivers. Wetlands, which are areas saturated by ground water, include marshes, shallows, swamps, bogs and estuaries.

The values and benefits of these vital areas far exceed the small acreage they occupy. In the otherwise arid Western U. S., these areas provide

scarce water and shelter for a variety of fish and wildlife species. The conditions of these areas can also have major impacts on water quality and quantity because they act as filters for the water flowing through them and can affect the entire watershed if degraded.

The BLM has set several goals in its effort to manage these important areas. Specifically, the agency is working to restore and maintain riparian-wetland areas so that 75 percent or more are in proper functioning condition by 1997, and to protect these areas by avoiding or mitigating surface-disturbance activities, such as road and pipeline construction, mineral development, recreation, timber harvesting and grazing. In addition, the BLM will acquire and expand riparian-wetland areas, mainly through land exchanges, and provide more information to the public about the importance of healthy riparian-wetland areas. Another goal is to expand partnerships with affected parties in the management of these environmentally sensitive areas.

Values of Riparian-Wetland Areas

Riparian-wetland areas

- Purify water, removing sediments as water moves through.
- Reduce the risk of flood damage.
- Reduce streambank erosion.
- Increase irrigation water by holding water in stream banks.
- Maintain instream and streambank ecology, increasing biodiversity.
- Increase ground water supplies.
- Support a diversity of animal and plant species.
- Maintain habitat for healthy fish populations.
- Provide water, forage, and shade for livestock.
- Provide areas to fish, camp, picnic, relax.



Although the *Riparian-Wetland Initiative for the 1990's* is not funded as a separate program, the BLM's budget for restoration and maintenance activities has risen from \$3.5 million in Fiscal Year 1988 to \$10.4 million in Fiscal Year 1992.

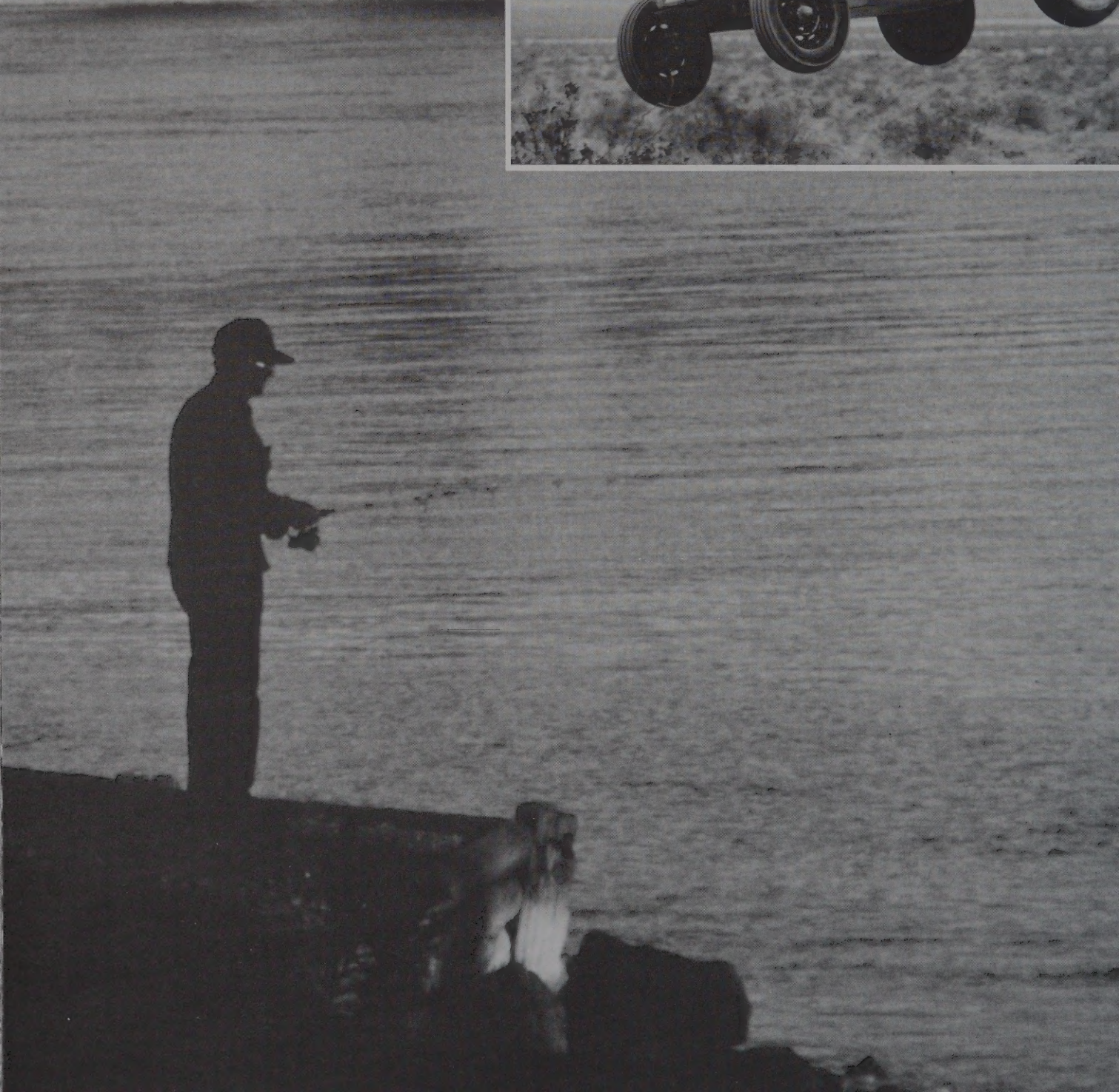
With the support of Congress and the public, the BLM will succeed in managing and protecting public lands for future generations of Americans to use and enjoy.

Through the Riparian-Wetland Initiative for the 1990's, the BLM has:

- Undertaken over 682 on-site projects to restore or improve riparian-wetland areas, such as constructing fences and planting trees, shrubs and grass.
- Maintained 532 additional riparian-wetland projects to ensure they continue their usefulness. The work, coordinated by BLM employees, is being accomplished with tremendous volunteer support and the involvement and assistance of numerous land users and interest groups.
- Conducted extensive aerial or topographical inventories on wetland management areas covering 1 million acres, primarily in Alaska, North Dakota and Wyoming.
- Conducted intensive inventories on an additional 1.5 million acres and 2,970 miles of riparian areas to assess ecological condition, establish site specific objectives, prepare resource plans, and identify restoration measures.
- Acquired over 21,000 acres in 1991 that is riparian or wetland in character. These transactions were made primarily through land exchanges. For example, the BLM protected the riparian corridor along the Marys River in Nevada by changing cattle grazing patterns and acquiring 54 miles of stream through a land exchange. This area is critical to the endangered Lahontan cutthroat trout.

Administering public lands for multiple uses is a challenging task. The BLM, with programs like *Recreation 2000*, *Fish and Wildlife 2000* and *Riparian-Wetland Initiative for the 1990's*, has shown that it is up to the challenge. With the

support of Congress and the public, the BLM *will* succeed in managing and protecting public lands for future generations of Americans to use and enjoy.



Recreation 2000

Introduction

Recreation 2000 is the BLM's response to the public's growing demands for increased recreational opportunities on the public lands. The principal goal is to ensure the availability of public lands for a variety of outdoor activities. Additional goals are to provide quality service to visitors, maintain facilities in their best possible condition and open new ones when appropriate, and improve the BLM's ability to protect recreation and other natural resources from needless loss or damage. Since starting the program 3 years ago, the BLM has made great strides in implementing *Recreation 2000*. Efforts like Back Country Byways, Adventures in the Past, and Fishing Partners with You have already significantly increased recreational opportunities for the public.

Recreation—on the rise

Visitors to BLM lands in 1991 spent more time for recreation than ever before—539 million hours, an increase of 15 million from 1990.

Other recreation statistics include the following:

- 94,376 camping and day-use permits were issued, a 21 percent increase over 1990. An additional 14,839 Special Recreation Permits were issued, a 48 percent increase.
- Fees collected in 1991 exceeded \$1.8 million.
- 8,484 volunteers contributed over 467 thousand hours to the recreation program, saving the Federal Government \$3.8 million.
- Over \$4.9 million was contributed from private sources to the recreation program in 1991.
- The BLM administers 2,000 miles of Wild and Scenic Rivers; 1,700 miles of Scenic and Historic Trails; 66 Designated Wilderness Areas; 6 National Conservation Areas; and 1 National Recreation Area. The BLM also oversees more than 290 Special Recreation Areas.
- About 90.8 million acres of public lands are open to off-road vehicles and approximately 54.4 million acres are open to limited off-road vehicle use.
- Over 1,000 commercial river permits; 572 commercial upland outfitter use permits, and 185 commercial off-road vehicle use permits were issued in 1991.
- There are more trails than ever on BLM lands, including 787 hiking trails covering 5,948 miles; 617 equestrian trails covering 5,272 miles; 505 mountain bike trails covering 5,848 miles; and 1,890 motorized vehicle trails covering 19,285 miles.

The Key: Diversity of Opportunities

The BLM offers the public the most diverse recreational opportunities of any Federal land management agency. BLM-administered public lands span the entire American scene, ranging from tundra to coastline, alpine meadow to sand dune, slick rock canyon to dry lake, raging river to subterranean cave.

Recreation 2000: A Strategic Plan

In 1987, the BLM developed a comprehensive, long-term plan aimed at bringing the management of outdoor recreation on public lands into the 21st century. Special attention was placed on how the BLM could: (1) enhance the visitor's total recreation experience; (2) capitalize on the momentum of ongoing BLM recreation activities; (3) clarify the role of outdoor recreation in the context of the BLM's multiple-use mission; and (4) create enthusiasm within

the BLM for an effective recreation management program. The BLM's resulting policy, *Recreation 2000: A Strategic Plan*, made it clear that outdoor recreation is not only compatible with, but a critical aspect of, the BLM's multiple-use management of public lands.

Implementation Plan for *Recreation 2000*

Building on the policy set forth in the strategic plan, the National Implementation Plan for *Recreation 2000* gives the BLM a blueprint from which it can do a better job in managing public lands for outdoor recreation purposes. The plan follows nine categories, or challenges to the recreation program: (1) budget/marketing, (2) visitor information, (3) resource protection, (4) landownership (5) partnerships, (6) tourism, (7) volunteers, (8) facilities, and (9) permits, fees and concessions. Recreation programs were budgeted at \$22 million in 1991, and \$25 million in 1992.



BLM administers the most diverse system of recreation opportunities in America ranging from Yaquina Head Outstanding Natural Area in Oregon to...

Goals

The BLM's outdoor recreation policy is to ensure the continued availability of public lands for a variety of outdoor recreation opportunities. In so doing, the BLM will maintain its balanced, multiple-use approach to the management of those lands.

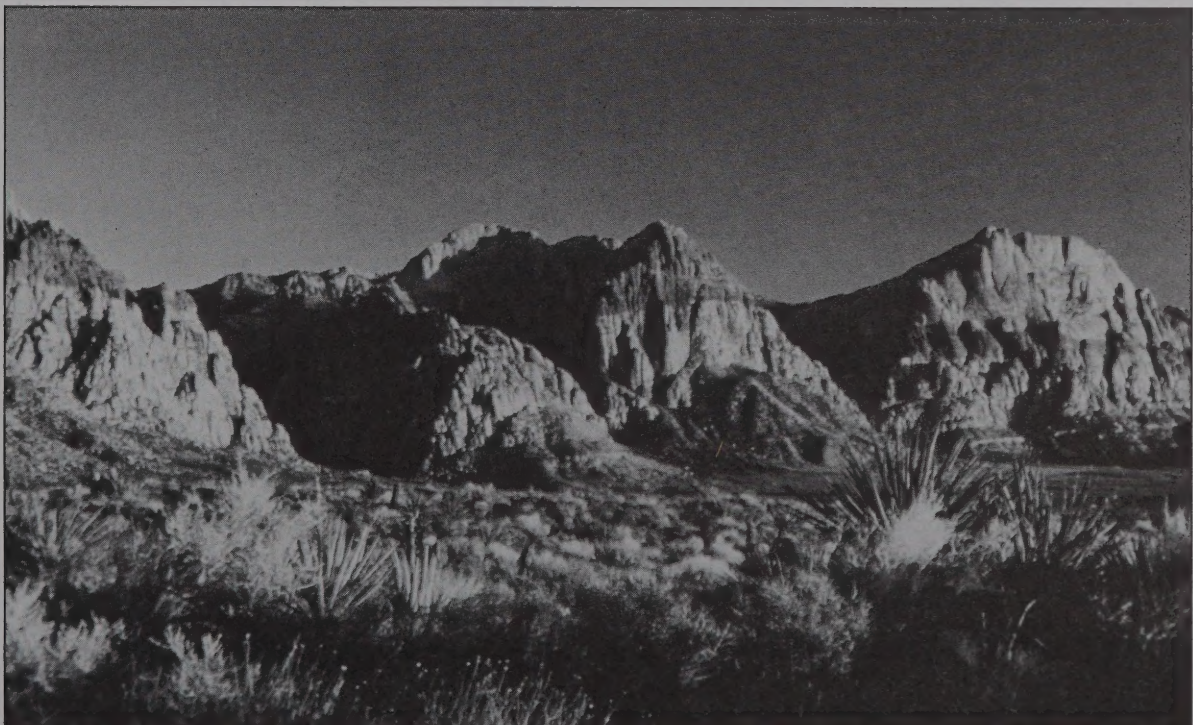
Goals defined in the initiative support this policy and will enable the BLM to be:

- Substantially more responsive to visitors' needs by delivering quality service to all segments of the public.
- Better known for its commitment to the protection and management of natural resources on public lands. The BLM will make sure the lands are available for multiple uses, including outdoor recreation.
- Better understood by the public, the executive branch and the Congress as a major

provider of recreation opportunities. That understanding will make the BLM an equal player when competing with other Federal agencies for outdoor recreation funds.

Specific goals include the following:

- Improve information and interpretive services to visitors;
- protect vital recreation resources;
- publicize the BLM's recreation management and support programs;
- distribute information about recreation opportunities through Federal, State, local and private partnerships; and
- expand public outreach initiatives.



...Red Rock National Conservation Area in Nevada.

Implementation Priorities and Progress 1989 through 1991

The following section summarizes progress made in meeting national implementation goals through 1991.

Challenge #1 Budget and Marketing

Goals

- Increase the Recreation Management Program's percentage of the BLM's budget.
- Ensure that Recreation Management Program funds are used in ways that bring the greatest return to the public and the BLM.
- Maintain the reputation of the BLM as a responsible management agency by raising public awareness of the agency's role in

safeguarding natural resources and offering recreational opportunities on public lands.

Implementation Progress

During 1989-1991, efforts focused on refining the budget-drafting process, improving coordination between budget and land-use planning and increasing public knowledge of the agency's Recreation Management Program. Recreation programs were budgeted at 22 million in 1991 and 25 million in 1992.

State Recreation 2000 Stepdown Plans

The single most important achievement was the completion of comprehensive *Recreation 2000* stepdown plans for each BLM State Office. Through these plans, national and State implementation priorities were set and accurate



BLM manages land along the Upper Missouri Wild and Scenic River

estimates for all facets of the recreation program were developed. Based on information from the stepdown plans, all basic needs for recreation management funding were met in FY 1991.

Additional funds were allocated to high-priority national projects based on criteria identified in the Annual Work Plan and Preliminary Year Budget Plan for that fiscal year. Improvements were also made in the tracking of recreation program activities.

Internal Evaluation

The BLM's Division of Management Research analyzed factors hindering the agency in reaching its budget and marketing goals. The division made key recommendations on staffing, such as the need for new employee skills in future years.

Training Courses

Training courses were developed to enhance employees' budgeting and programming coordination skills. Manuals and handbooks were also written or revised to provide additional direction.

Marketing

A number of marketing-related efforts were initiated, such as (1) a pilot study using the highly regarded Public Area Recreation Survey to assess recreation visitor characteristics, needs and trends at special recreation management areas in California, Oregon, Colorado, Nevada and Utah, and (2) funding the BLM's participation in a National Recreational

Marketing Study being conducted by the U.S. Forest Service.

Challenge #2 **Visitor Information** **and Interpretation**

Goals

- Enrich the quality of visitors' outdoor recreation experiences on public lands.
- Educate the public about its ownership of and responsibility for preserving public lands.
- Foster public support for multiple-use and sustained-yield policies.



The "Tread Lightly" program promotes protection of public and private lands

- Maintain an appropriate on-site presence that meets the needs of visitors.

Implementation Progress

Recreation management is one of the BLM's most visible activities. In conducting its recreation program, the BLM provides a land base for recreation opportunities and offers information and interpretation services. Examples are direct visitor contact, publications, signs, interpretive facilities and visitor centers.

The National Implementation Plan for *Recreation 2000* identified actions to be undertaken and, if possible, completed during the reporting period (FY's 1989 - 1991). These actions were directed at raising the BLM's visibility, improving its public image and upgrading the professional skills of recreation and visitor service staffers. During the reporting period, the BLM took significant steps to achieve those aims.

Employee Uniforms

To make the public more aware of the BLM, the agency implemented a consistent uniform policy for employees. As of July 1991, more than 5,100 of some 10,700 agency employees were authorized to buy and wear uniforms. The uniformed employees are line managers, recreation program leaders, visitor service specialists, law enforcement rangers, front office contact staff, maintenance workers and resource program personnel.

Outreach

The BLM has made substantial efforts to reach out to professional and industry organizations, recreational user groups and the public at large. During 1990-1991, the BLM participated in annual meetings, industry shows and other special events of such diverse organizations as the National Recreation and Parks Association, the National Association for Interpretation

and the Society for American Foresters. In addition, the agency displayed exhibits at events like the Trans Expo in Washington, D.C., and the National Recreation and Park Association's Congress for Recreation in San Antonio, Texas; Phoenix, Arizona; and Baltimore, Maryland.

Showcase Projects

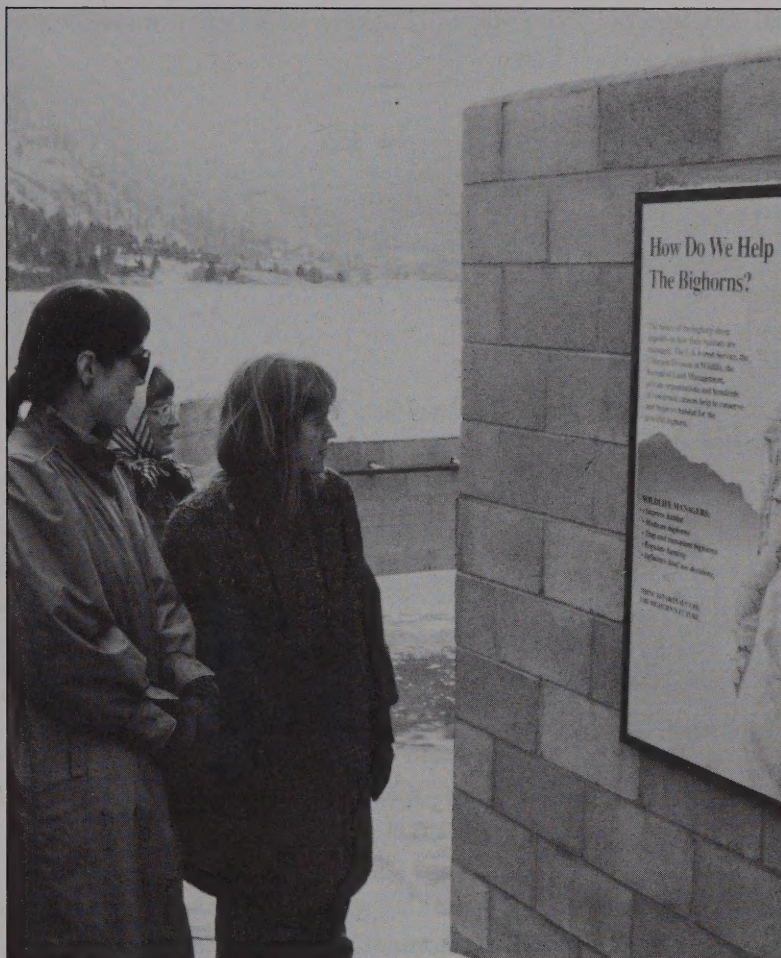
The BLM hosted 44 recreation showcase projects in 1990-1991 to focus attention on the agency's *Recreation 2000* implementation efforts. Among the activities were numerous dedications of Wild and Scenic Rivers, National Conservation Areas, Wilderness Areas and Back Country Byways. The BLM also hosted regional events in the Four Corners and Great Basin areas that dealt with the BLM's Adventures in the Past cultural resource initiative. The agency has also been involved in the national Tread Lightly off-highway vehicle land ethics program.

Agency Publications and Signs

To make the BLM more recognizable the agency revised its publication manual and handbook in 1990. As a result, BLM materials have taken on a readily identifiable look. Work has begun to revise agency signs, with the goal of improving their usefulness to the public.

Information Distribution

The agency has launched an effort to distribute its recreation guides, maps and brochures more widely and conveniently to the public. Currently, the BLM operates or participates in the management of 21 visitor centers. Some of these are multi-agency facilities that offer "one-stop" information services to visitors. The circulation of BLM materials has also been improved through partnerships with natural history associations.



Bighorn viewing area in Georgetown, Colorado

program notes, catalogs and videos. The agency also sponsors interpretive training courses and workshops.

Professional Development

Since the BLM began implementing *Recreation 2000*, it has made considerable advances in the area of professional development. In 1990, the BLM and seven other Federal agencies formed a steering committee to establish a development program for professional outdoor recreation managers. The BLM also has promoted professional development through its work with the National Association for Interpretation (NAI). In 1991, the BLM cosponsored the National Interpreters Workshop in Vail, Colo.

Computerized Information

The BLM contracted in 1990 with a national computer recreation information service to distribute data to home computer users and the travel industry. Agency information is now available to more than 2.4 million home users and 70,000 travel agents. To date, the system has generated over 1,000 requests for BLM recreation-related publications. The system is scheduled to be expanded in 1992 to give up-to-date information on recreation events and volunteer opportunities.

Internal Communications

The BLM continues to publish and broadcast in-house information through its bulletins,

Challenge #3 Resource Protection and Monitoring

Goals

- Maintain natural resources to ensure high-quality outdoor recreational experiences.
- Protect resources by emphasizing public education, using such means as interpretation, information services and personal contact.
- Assess recreational use levels, activities and other data to keep current with the public's desires for recreation.

- Make sure there are sufficient law enforcement personnel for resource protection and visitor services.

Implementation Progress

During the reporting period, resource protection and monitoring were directed at expanding the BLM's on-site staffs and improving training, planning and operational procedures.

Staff Adjustments and Partnerships

All State Offices assessed their recreation and resource protection staffing needs and made adjustments when possible. The BLM also has been working more closely with State and local law enforcement offices, resulting in more efficient patrols and data collection.

Education and Public Involvement in Resource Protection

The BLM has incorporated public involvement and education concepts into its recreation outreach effort. Examples include the BLM's land ethics programs such as *Tread Lightly* and *Leave No Trace*, which are being implemented in several States.

In addition, visitor facilities such as parking lots and recreational trails serve to further protect resources by guiding visitors to designated areas which can accommodate heavy use, and limiting access at more fragile areas.

Law Enforcement Training

The BLM, which stepped up its recruitment of law enforcement officers in FY's 1990 and 1991, introduced two training courses to familiarize new rangers with the agency's multiple-use management approach and operating procedures. The courses are appropriate for State and local law enforcement agencies and will enhance

cooperation between BLM and non-Federal officers.

Challenge #4 **Landownership and Access**

Goals

- Make public lands that offer outstanding recreation opportunities more accessible to the public.
- Work with private landowners to enable public access across private property. Stress non-payment approaches, such as easements, contracts and land exchanges, to resolve access problems.
- Maintain a spirit of cooperation with landowners while representing the interests of the general public.
- Consolidate public land parcels to improve management and better serve public needs.

Implementation Progress

The BLM is responsible for managing vast tracts of public lands that are scattered among private parcels. This checkerboard pattern of Federal and private ownership makes management difficult and restricts or precludes public use of some recreation resources. It is no surprise that the recreating public's most common complaint to the BLM is the inability to use certain Federal lands because of private land barriers. The agency's land ownership and access improvement efforts are directed at consolidating Federal tracts to create high-value recreational opportunities for the public and providing legal and practical access to BLM-administered lands.



Visitors at BLM's Lowry Ruins, a stabilized and interpreted archaeological site in southwestern Colorado

Land Acquisition and Access

During the FY1989-1991 reporting period, the BLM made gains on a number of fronts. All States completed or had nearly finished their assessments of current and anticipated land acquisition and access needs. Acquisition and access proposals were guided by Resource Management Plans.

BLM land acquisitions are prioritized by the Interior Department through a special ranking system which rates BLM proposals with those of the National Park Service, the Fish and Wildlife Service and the Agriculture Department's Forest Service. The system seeks an overall balance of recreation and conservation oriented acquisitions.

Land and Water Conservation Fund

The BLM continues to use land exchanges and other non-payment methods to consolidate and improve its management of public lands. In addition, the BLM has used the Land and Water

Conservation Fund to buy lands deemed critical to effective land management. In this connection, *Recreation 2000* and *Fish and Wildlife 2000* have served as catalysts for land purchases to support recreation, fish and wildlife and riparian management objectives. Since the unveiling of *Recreation 2000*, the BLM's portion of the Land and Water Conservation Fund has grown by more than 180 percent — from \$8.9 million in FY 1988 to \$25 million in FY 1992.

Challenge #5 Partnerships and Volunteers

Goals

- Step up cooperative approaches to public lands management.
- Make more efficient use of Federal funds allocated to the BLM for outdoor recreation management.

- Improve service to visitors.
- Foster the BLM's working relationships with State and local governments, other Federal agencies and private groups to improve the management of outdoor recreation.
- Supplement existing funding and personnel in recreation, visitor service and maintenance programs through the use of volunteers.
- Encourage a public "outdoor ethic" by helping citizens to better appreciate the value of public lands.

Implementation Progress

Since 1946, the BLM has worked with various government agencies and private groups to accomplish its multiple-use mission. Good examples of this are the agency's lease, permit and concessions program, cooperative cost share (challenge grant) initiative and volunteer programs. The criterion used in deciding whether to form a given partnership is whether the arrangement would be in the public interest. If a would-be partnership meets this test, it is put into effect.

"Shared Stewardship" Volunteer Program

At the national level, the BLM has expanded its management partnerships with State and local governments and private groups. In FY 1991, the BLM issued a comprehensive plan titled "Shared Stewardship," which gave guidance on maximizing the use of the BLM's volunteer workforce. Partnerships include agreements to manage rivers, trails, caves and historical sites; to staff visitor centers; to collect fees; to maintain campgrounds; and to create public access across private property.



"Fishing Has No Boundaries" has renewed BLM efforts to provide greater public access for recreational fishing

The BLM has formed State and local government partnerships, and has signed memoranda of understanding and assistance agreements with such private groups as the Go Camping America Committee, the All-Terrain Vehicle Safety Institute, the National Rifle Association, the Motorcycle Industry Council, the American Motorcycle Association, and Defenders of Wildlife.

Finding New Partners

Forging new partnerships is a top priority of the BLM. The Division of Recreation, Cultural and Wilderness Resources and the Branch of Volunteer Management published a brochure promoting the BLM's recreation partnerships and volunteer opportunities. In this same vein,

the Branch of Recreation contracted in 1990 with a national computer information network to disseminate recreation information to the public. This system enables the BLM to advertise work opportunities for volunteers.

Challenge #6 Tourism Programs

Goals

- Help States and local communities boost their economies through tourism.
- Improve public information and outreach efforts.

Implementation Progress

In States that contain a sizable amount of BLM-administered public lands, travel and tour-

ism rank as the number one employer in seven States (Alaska, Arizona, Colorado, Idaho, Nevada, New Mexico and Utah), number two in two States (Montana and Wyoming), and number three in two States (California and Oregon). Accordingly, States and localities are developing projects on BLM lands that are aimed at attracting regional, national and international visitors.

Tourism Promotion

The BLM has moved aggressively to promote adventure travel. In 1990, the BLM became a full-time participant on the Department of Commerce's Federal Rural Tourism Policy Task Force. Also that year, the agency cosponsored a national workshop on "Enhancing Rural Economies Through Amenity Resources" at Pennsylvania State University. More recently, the BLM joined with other Federal land management agencies to publish interagency tourism and recreation materials. At the local



BLM must rely on its local partners to help provide recreational opportunities

level, the BLM is working with State travel agencies to produce maps, wildlife guides and vacation planners.

Tourism Publications

The BLM has begun negotiations with a half dozen major publishing companies to produce materials about the agency's recreation activities. The agency has also cosponsored or been involved in numerous State and regional tourism conferences, meetings and other events which have raised the agency's profile as a provider of tourist attractions.

Challenge #7 Facilities

Goals

- Protect outdoor recreation facilities and resources that can be damaged by public use.

- Provide more recreational facilities needed for visitors' use and enjoyment of public lands.
- Offer a safe and healthy environment for recreation.
- Build a positive and professional image of the BLM.

Implementation Progress

In order for the BLM to meet its recreation goals, the agency must develop and maintain recreational facilities, not only to meet visitor needs, but also to direct visitors to areas that can withstand the impact of large numbers of people. Resources on which a recreation attraction is located are often damaged if overused. Facilities, like campgrounds, picnic sites and trails act to draw visitors to better suited locations.



Off-highway tours in the Santa Rosa Mountains National Scenic Area of California are an example of the BLM's interest in expanding tourism partnerships on the public lands

Maintenance Evaluations

In response to the need to inventory and, as necessary, correct maintenance deficiencies, the BLM initiated two maintenance evaluations. The first of these was intended to give rough maintenance cost estimates for budget purposes. The second evaluation was carried out by means of an automated facility maintenance tracking system called the Maintenance Management System. This Bureau-wide system contains inventory status and condition information for use in determining maintenance needs and priorities for all BLM-owned facilities. In 1991, inventories of all BLM-owned facilities were completed by 10 States. Full completion is expected in 1992.

Challenge #8 Permits, Fees and Concessions

Goals

- Ensure that the public is given a full range of outdoor recreation activities.
- Require those who use certain facilities, areas and services on public lands to contribute directly to operation and maintenance costs.
- Protect limited natural resources and outdoor recreation opportunities by controlling recreation use.
- Encourage the private sector to be involved in offering recreation opportunities and services on public lands.
- Protect public health and safety and reduce conflicts among the various users of public lands.

Implementation Progress

The BLM is implementing its Special Recreation Permit Policy in order to make sure that it recovers fair market value for the use of public lands. Also, the agency will carry out a concession policy that encourages the private sector to expand outdoor recreation services. After reviewing and updating policies on concessions, the Branch of Recreation completed work in 1990 on a Commercial Recreation Permits Handbook and a Concession Lease and Vendor Permits Manual. In 1991, the BLM organized six task force teams to review other recreation issues related to permits, fees and concessions.

The Secretary of the Interior established a Concessions Management Task Force to examine Federal agencies' concession practices and to recommend changes in such operations throughout the Department. The report is scheduled for release in 1992.



Reconstruction of portions of the Wild Rivers Recreation Area's La Junta Trail improves recreation access and visitor safety

Recreation 2000 Accomplishments

State-by-State Overview

The overriding objective of *Recreation 2000* is to ensure a variety of top rate recreation opportunities and services to the public. While the national-level implementation plan creates an administrative framework for achieving the goals of *Recreation 2000*, success must ultimately be measured in terms of the BLM's on-site achievements.

The following section details only a few of the 1991 accomplishments reported by BLM State and District Offices. For a complete list of BLM State-level recreation accomplishments, contact the appropriate BLM State Office.

Alaska

Information Centers

Alaska BLM formed a partnership with the National Park Service, the U.S. Forest Service

and State recreation agencies in the Alaska Public Lands Information Centers. There are four such centers in Alaska, with the BLM supplying information to three of them. The phone system operates during normal business hours, while a code-a-phone handles after-hour calls. The center logged nearly 12,000 phone calls for information in 1991.

Round-the-clock Service

Steese/White Mountain District staffers work evenings, weekends and July 4th on a rotating schedule to provide a round-the-clock, on-site presence at campgrounds, rivers and trails. Boy Scouts, Girl Scouts and hiking clubs are used to patrol rivers, trails and recreation areas. Recreation and wildlife staffs operate visitor information booths for hunter contact on the Denali and Dalton Highways and the White



Volunteers build a recreation cabin in BLM's White Mountains National Recreation Area in Alaska

Mountains National Recreation Area. This highly visible BLM presence has reduced vandalism.

New Cabins

The Anchorage District Office completed the construction of an 11x17-foot log cabin on a remote stretch of the Iditarod National Historic Trail. The work was done with the help of Alaska Natives, who supplied the equipment needed to transport the logs to the building site. The cabin will help close the gap in a long, potentially hazardous section of the trail between the Alaska villages of Unalakleet and Kaltag.

As part of the BLM Showcase Program in the White Mountains Recreation Area, the District built log cabins at O'Brien and Trail Creeks, which improved the winter trails system.

Arizona

Outdoor Classroom

The Safford District is working with State officials and local schools to create an outdoor classroom for natural and cultural resource education. The facility, Dankworth Outdoor Environmental Education Center, is located at the Dankworth Lake unit of Roper Lake State Park.

Volunteer Stewards

The Arizona Strip and Phoenix Districts are enlisting volunteer stewards to monitor archaeological interpretive sites, such as Colo-

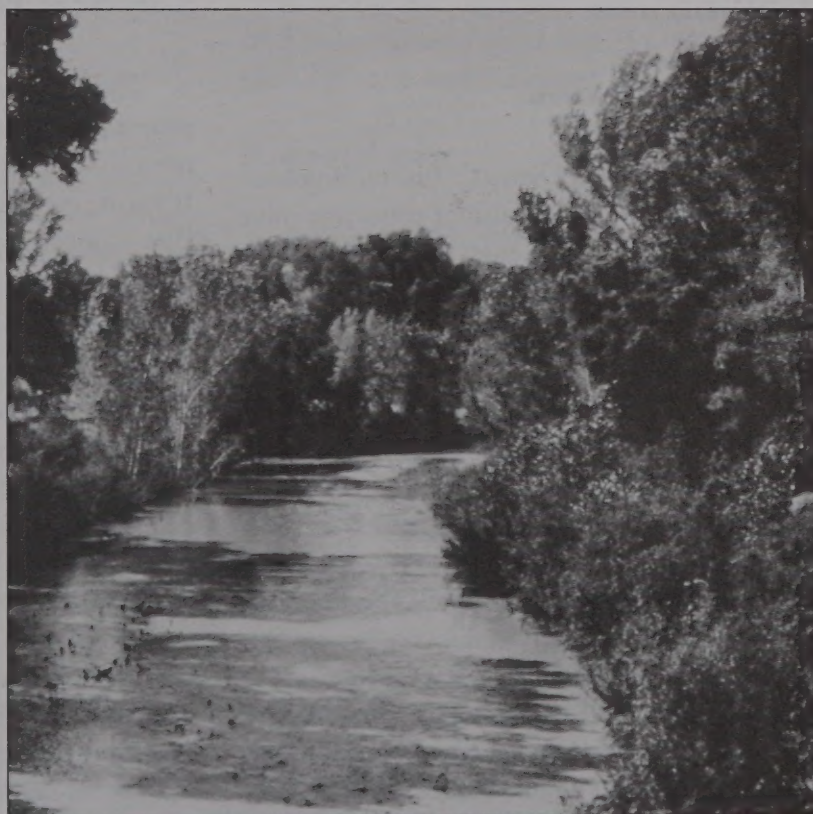
rado City Kiva and Little Black Mountain Petroglyph.

Expansion

Arizona's aggressive landownership adjustment initiative has resulted in the expansion of the San Pedro Riparian National Conservation Area and many of the 47 Wilderness Areas managed by the BLM in the State.

New Trailhead

The Lower Gila Resource Area of the Phoenix District erected a trailhead on the 4.5-mile trail leading to the summit of Table Top Mountain, which is a new BLM Wilderness Area. The trailhead protects wilderness and cultural resources from damage by vehicles and hikers while providing information and limited recreation to visitors.



Arizona's active lands program has resulted in key acquisitions such as the San Pedro Riparian NCA



The Bizz Johnson Trail's Devils Canyon Trestle underwent extensive repairs by a team of volunteers

California

Outdoor Education

The Bakersfield District's Bishop Resource Area held a week-long outdoor education pilot project with Los Angeles, Inyo and Mono County school students at Camp Inyo in Big Pine. The project was financed with \$4,000 from the BLM and more than \$8,000 from private sources, such as McDonald's and Mammoth Lakes Ski Resort.

Protection

The Ukiah District's Clear Lake Resource Area undertook a major resource protection project within the Knoxville Recreation Area in 1991. Barriers and signs were put up to restrict vehicle use in rare-plant habitat, discourage trespass onto adjacent private lands and to rehabilitate damaged lands.

Caboose as Visitor Center

The Susanville District's Eagle Lake Resource Area obtained a caboose through a partnership with the Lassen Land and Trails Trust. It will be used as a visitor contact station for the Bizz Johnson Trail.

Construction Projects

California BLM completed three construction projects in FY 1990: Hole-in-the-Wall Campground (Phase I), Rush Creek fishing access and Hobo Campground access road (Bizz Johnson Trail). With increased funding in fiscal year 1991 (\$1,347,000), the BLM began several new projects in California including Hole-in-the-Wall Visitor Contact Station and the rehabilitation of Kelso Depot.



BLM display at First International Mountain Bike Championship in Durango, Colorado

Colorado

Kiosk Installed

The Royal Gorge Resource Area installed the first official BLM Back Country Byway interpretive kiosk at Cripple Creek along the Gold Belt Tour in 1991. The kiosk informs potential byway visitors about route conditions and key features, such as the area's railroad and gold mining history and its fascinating geology, which makes it a world-class dinosaur fossil site and an internationally renowned rock-climbing area.

Site Enhancements

The BLM's San Luis Resource Area and the American Mountain Foundation organized two enhancement efforts in 1991 for the Penitente Canyon rock-climbing area. Volunteers, who installed a toilet, picnic tables and parking bar-

riers, contributed over 500 hours of work. Local businesses donated more than \$4,000 of merchandise to reward the volunteers.

Acquisitions

Recreation acquisitions in Colorado totaled 4,100 acres in 1991. These were done by various means, including direct acquisition by the BLM and partnership acquisition by non-profit entities and Federal agencies.

Mountain Bike Trail

The Colorado-Midland mountain bike trail was dedicated in 1991. Parts of the trail follow the grade of the historic Colorado-Midland railroad.

Facility Improvements

The Arkansas Headwaters partnership between the BLM and the Colorado Division of

Parks and Outdoor Recreation has resulted in capital facility improvements. In 1991, the Colorado Department of Parks and Recreation built a changing facility and rest rooms at Hecla Junction, the busiest river boating launch and takeout site in Colorado. The new facility serves up to 1,200 boaters per day on peak weekends. In fulfillment of its primary visitor services role on the river, the BLM began construction of a gazebo and interpretive kiosk for bighorn sheep viewing.

Idaho

Trail Easement

The Burley District has bought a trail easement on one-half mile of the main route of the Oregon Trail. The segment is part of a 7-mile section of undisturbed trail ruts.

Acquisition

The Coeur d'Alene District bought Pink House Hole Recreation Site along the Clearwater

River Corridor. The site contains a graveled parking lot, a double-wide boat ramp, 1,700 feet of river frontage, and space for camping and restrooms. The District also purchased some 325 acres of private land adjacent to the Clearwater River between Kamiah and Greer. The acquisition accommodates such recreation activities as hunting, fishing, hiking, berry picking and camping.

Volunteers

The Shoshone District's use of volunteers is highlighted by its partnership with the Magic Valley Grotto, a local group of spelunkers who volunteered more than 4,500 hours of work as they inventoried over 140 caves.

New Information Center

To create a more diverse economic base, Riggins, a timber and mining city, has been turning to recreation and tourism. This is especially evident on the Lower Salmon River, which runs through the town. The BLM's



Idaho's Salmon River sets the standard for cooperative river management



Fully accessible fishing trail at Holter Lake, Montana

Coeur d'Alene District, working with city officials, the local Chamber of Commerce and the Forest Service, designed and built the Riggins Visitor Information Service. The facility is manned by volunteers, along with BLM and Forest Service seasonal staffers.

Montana

Outreach

The Montana State Office produced 14 informational and interpretive brochures in 1991. In cooperation with other government agencies and private groups, the BLM office has published State and local vacation guides.

Trail Construction

Butte District has completed 4 miles of delineation and construction of the Continental Divide Trail, with assistance from Dillon area volunteers.

Acquisition

The BLM bought 1,700 acres of land along the Upper Missouri National Wild and Scenic River near Loma.

Access

Montana's Powder River Resource Area and volunteers built a handicapped-accessible picnic and fishing site near Miles City. The site features over 1,700 feet of concrete trails, a parking area with a wheelchair ramp and wheelchair-accessible picnic tables. Volunteer contributions in labor and material saved taxpayers about \$20,000.

Nevada

Law Enforcement

The Las Vegas District stepped up patrols in 1991 of Back Country Byways and other envi-

ronmentally sensitive areas. Law enforcement ranger staff grew to eight positions, providing greater protection of natural resources and the public. Rangers investigated more than 525 incidents.

Conservation Easement

In the Elko District, the BLM obtained a conservation easement in conjunction with the Marys River Land Exchange, which allows public access through private lands along the river for fishing and day-use activities. The BLM paid for the easement by giving the private landowner fee title to BLM-administered public lands located near his ranch.

New Boat Ramp

Carson City District formed a partnership in 1991 with the Nevada Department of Wildlife and Mineral County to construct a new boat

ramp at Walker Lake Recreation Site. The Department of Wildlife funded and designed the ramp, while Mineral County built it. The BLM furnished the site, signing, operation and maintenance of the ramp.

Tree Planting

The Battle Mountain District's Shoshone-Eureka Resource Area and 100 local school children planted 50 cottonwood and Russian olive trees at the Mill Creek Recreation Site.

Interpretive Displays

The Las Vegas District works closely with the Las Vegas Convention and Visitors Authority to showcase recreation opportunities on public lands in southern Nevada. In FY 1991 they jointly developed interpretive displays for visitor centers on Interstate 15, reaching an audience of almost 7 million tourists a year.



BLM interpreter leads local school group through Hidden Cave archaeological site in Nevada

New Mexico

Corporate Support

New Mexico BLM has mobilized corporate support for special events like the Wild Rivers Celebration, Organ Mountains Festival, the Four Corners Tribute and the Governor's Conference. The private sector has donated over \$200,000 for on-site projects related to river and trail management, the protection of wildlife and cultural resources, and the signing and interpretation of recreation resources.

Outdoor Classroom

The Las Cruces District conducts the Aguirre Springs Outdoor Classroom, which enables all fourth grade students in the Las Cruces School District to go to recreation sites in the Organ Mountains. There, BLM specialists and volun-

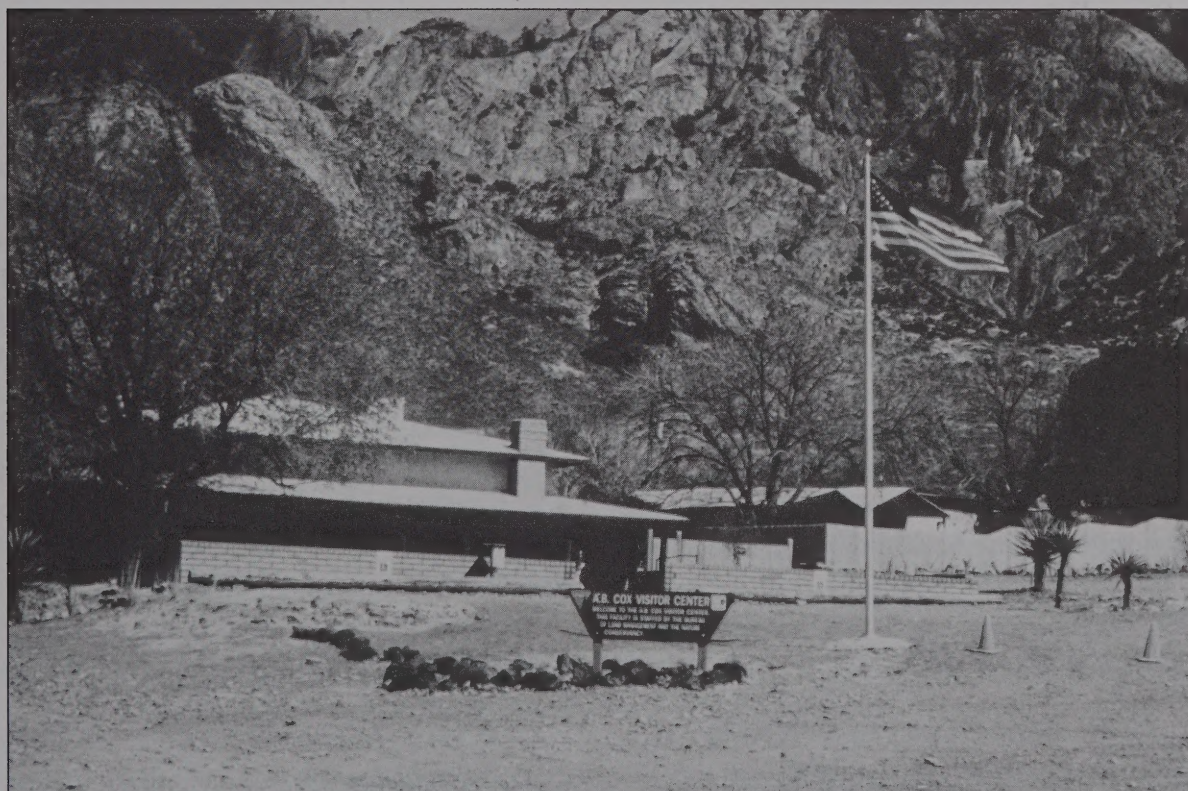
teers give presentations on geology, archaeology, wildlife, plants and safety. Some 1,500 students participated in the program in FY 1991.

Land Exchange

The BLM completed a land exchange involving The Nature Conservancy for about 2,900 acres of the Cox Ranch properties in the central Organ Mountains. This area is habitat for several threatened or endangered plant species and is a major use area for the growing populations of Las Cruces and El Paso.

New Building

The BLM constructed a maintenance and visitor service building at the Valley of Fires Recreation Area. Maintenance staff can now work in a climate-controlled environment instead of enduring the howling winds of winter and the blazing sun of summer. The structure is



The newly renovated A. B. Cox visitor center in New Mexico's Organ Mountains



Land exchanges help improve recreation access to Oregon's John Day Wild and Scenic River

handicapped accessible. Plans are in order for interpretive displays.

Oregon and Washington

State Fair

In Oregon, District employees and volunteers staffed the BLM log cabin at the 1991 Oregon State Fair. A new wilderness display was featured inside the cabin, with a wild burro corral outside. More than 1 million people attended the fair.

Wildlife Viewing Guide

Oregon and Washington published a full-color Watchable Wildlife Viewing Guide describing 47 public land viewing sites, including native North American wildlife species and habitats.

Historic Restoration

The Salem District in Oregon is reconstructing the Peachuck Lookout, a wood and stone cupola-style fire lookout built by the

Clackamas-Marion Fire Protection Agency in 1932. This is the only fire lookout of its style remaining in the Northwest. The BLM is supplying all the materials, while volunteers are doing the construction.

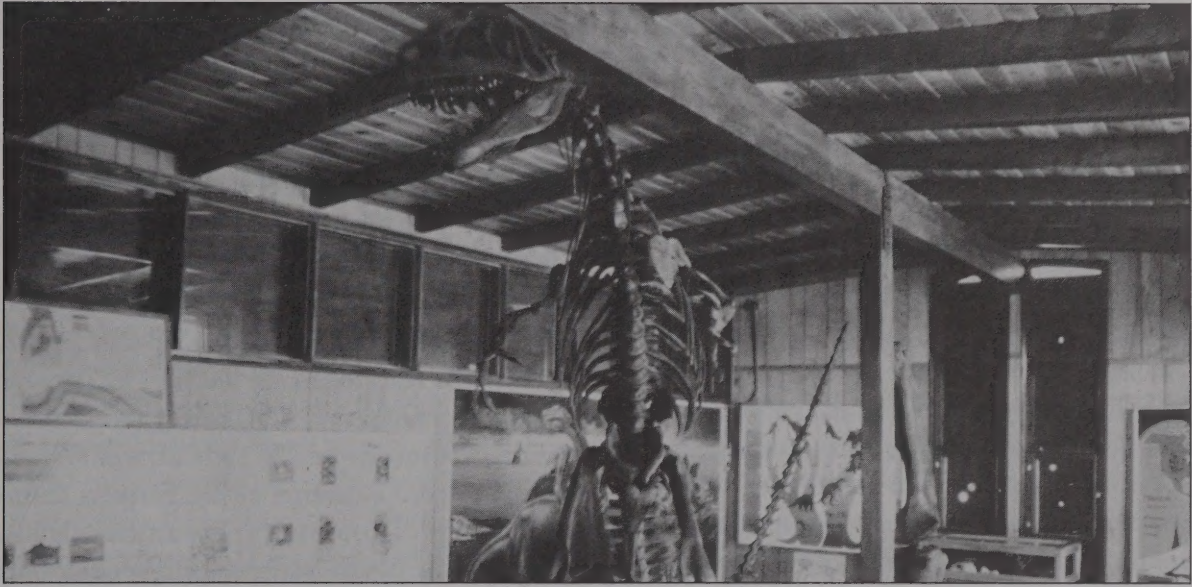
Acquisition

The Coos Bay District in Oregon acquired privately owned lands at two Special Recreation Management Areas. Using Land and Water Conservation funds, the District bought two parcels in the New River Area that totaled 351 acres. The purchase, completed with the help of The Nature Conservancy, will ensure access to the river and help protect threatened and endangered species.

The Prineville District in Oregon completed a land exchange that brought a block of more than 52,000 acres of private land into public ownership.

Road Construction

The Salem District finished a \$2.2 million road construction project at Yaquina Head Outstanding Natural Area. The mile-long, two-



The Cleveland-Lloyd Dinosaur Quarry Visitor Center in Utah, one of 21 visitor centers operated by BLM

lane paved road replaces a graveled, potholed access route that was narrow and dangerous. Yaquina Head's nearly 400,000 annual visitors can now experience safe and enjoyable access for the first time since Congress designated the area in 1980.

Utah

Race Track

The Bonneville Salt Flats Race Track was prepared and maintained entirely with private funds in 1991. In past years, the BLM absorbed the cost of the track survey, layout, dragging and maintenance. But starting in the mid-1980's, funding was shifted to the racers.

Information by Computer

The BLM and the U.S. Forest Service developed a computer system that enables those agencies and the Utah Travel Council to share data. The joint system supplies recreation and travel information throughout Utah via visitor-operated kiosks. More than 100 units are expected to be placed in key marketing locations throughout

the State. Thus far, the BLM has installed kiosks in the Moab District Office and the State Office public room.

Acquisition

Drawing from the Land and Water Conservation Fund, Utah BLM bought 156 acres at the Cisco takeout. The purchase of this parcel facilitates public use of the Westwater Canyon section of the Colorado River, Utah's best place for an overnight whitewater river trip. This segment is now used by over 10,000 river runners per year.

Clean Up

The Moab District conducted the first annual clean-up event in partnership with KUED public television, KUER public radio, local government and civic groups. Nearly 200 volunteers cleaned up six recreation areas near Moab.

"Little Hollywood" Restored

Located along the U.S. Highway 89 tourist route between Lake Powell and Kanab, Utah's

.....

"Little Hollywood," the Paria Movie Set has served as the site for many Westerns. After several camping trips to the area, Scout Troop 291 of Bountiful became concerned about the deteriorating condition of the tourist attraction. In 1991, Troop 291 and the BLM restored three of the "Main Street" buildings on the set.

Hang Gliding

The Vernal District issued permits in 1991 for both the regional and national hang gliding championships, which involved about 185 competitors. The events took place on Blue Mountain, located within the Book Cliffs Resource Area.

Wyoming

Operation Respect

The Rawlins District is involved in the Operation Respect program, which seeks to reduce trespassing and vandalism by improving cooperation between sportsmen and landowners.

Markers Installed

The Pinedale Resource Area organized a project in 1989 to mark the Lander Cutoff of the Oregon Trail across southwest Wyoming. Some 100 markers were installed.

Road Closures

The ecology of the Green Mountain area, located southeast of Jeffrey City, has been recovering since the early 1980's from uranium exploration that left

exploration roads and pits. In 1991, the Lander Resource Area closed three miles of roads not needed by current resource users such as recreationists, timber operators and livestock interests.

Magazine Coverage

The South Bighorn Redwall Back Country Byway was featured in the Spring 1990 issue of *Wyoming Horizons*. The Byway received national exposure in the Fall 1991 issue of *Friendly Exchange*, the magazine of the Farmers Insurance Group of Companies. The article tells how to get to the byway while colorfully describing an outstanding, but little known area of Wyoming.

New Campgrounds

The Bureau of Reclamation transferred recreation management of campground facilities at the Fontenelle Reservoir/Recreation Area to the BLM's Rock Springs District. This added 70 prime campground units to the District's water-based recreation program.



Wyoming's Continental Snowmobile Trail is fast becoming a regional recreation attraction

Future Challenges

Since the inception of *Recreation 2000* in 1988, two major evaluations of the BLM's recreation management program have been conducted: (1) a Bureau wide Recreation Program Evaluation, completed in January 1989, and (2) an Analysis of Impediments to Implementing *Recreation 2000* and *Fish and Wildlife 2000*, finished in August 1990. The findings and recommendations of both reports reflect similar issues and concerns. According to these studies, major obstacles to *Recreation 2000* are found in seven categories: (1) funding and budget support, (2) workforce needs, (3) attitudes, (4) support needs, (5) management accountability, (6) planning and (7) coordination.

The single most pressing issue identified was the need for sufficient and long-term funding to implement *Recreation 2000*. Although budget increases in FY's 1991 and 1992 have enabled the BLM to make strides in implementing certain elements of the initiative, there are backlogs in recreation maintenance and construction. Successful application of *Recreation 2000* will depend not only on adequate, but steady, long-term funding. Major shifts in annual appropriations make implementation more difficult and tend to undermine public and staff support for the BLM's recreation program.

Work Force Needs

As the recreation program grows to meet the objectives of *Recreation 2000*, the BLM must expand and diversify its recreation expertise. Unfortunately, college-level enrollment in recreation courses has fallen over the past 10 years, reducing the BLM's workforce pool. Greater competition with the private sector and other Federal agencies also has hurt the BLM's ability to recruit. Factors identified as existing or potential barriers to implementation include: (1) the need for new marketing and interpretive skills; (2) the need to replace certain skills that have been lost in recent years, such as engineering, acquisition and support functions; and (3) the need to diversify the work force in order to keep pace with changing use patterns and social values.

The principal goal of the BLM's recreation policy is to ensure the availability of public lands for a variety of outdoor activities. Through the programs described in this report, the BLM will see to it that by the Year 2000, there will be even more recreational opportunities on the public lands to meet the growing needs of all Americans.



Fish & Wildlife 2000

Introduction

The Bureau of Land Management (BLM) is the Nation's steward for 270 million acres of public lands containing a variety of ecosystems and spectacular habitats. These public lands provide homes for more than 3,000 species of mammals, reptiles, fish and birds. The primary management challenge is to protect and enhance these valuable resources while providing for multiple uses such as recreation, mineral development, livestock grazing, timber management and cultural values.

The BLM manages more fish and wildlife habitat than any other Federal or State agency. BLM lands contain:

- Over 3,000 species of mammals, birds, fish and reptiles.
- 206 million acres of big game habitat for over 185,000 elk, over 200,000 antelope, over 750,000 caribou, over 1.5 million deer, and 28,000 bighorn sheep.
- 233 million acres of small game habitat.
- 23.7 million acres of riparian-wetland habitat.
- 171,000 miles of fishable streams.
- 1,000 threatened, endangered and candidate species.

- All native species of big game in North America.
- Eighty percent of the remaining desert bighorn sheep habitat.
- Extensive habitat for salmon, trout and rare desert fish species.

To guide the continued management of these important fish and wildlife habitats, the BLM has initiated its innovative action plan *Fish and Wildlife 2000 - A Plan for the Future*. This comprehensive program outlines a strategy for effective management of fish and wildlife resources through the 21st century; encourages cooperation between the BLM and other government agencies, special interest groups, and private industry; and promotes the long-term restoration of special wildland resources.

Many organizations, individuals and volunteers have assisted the BLM in tackling its myriad challenges in implementing *Fish and Wildlife 2000*. This chapter highlights the 1991 annual report of accomplishments for *Fish and Wildlife 2000* implementation.

The accomplishments highlighted in this report are divided into three components: Fisheries Habitat Management, Wildlife Habitat Management, and Threatened and Endangered Species Management.

Goals and Objectives

Implementation Progress

Fisheries Habitat Management

The BLM boasts impressive statistics for fish habitat, over 171,000 miles of fishable stream habitat, 2.4 million acres of lakes, and over 172,000 acres of reservoirs. In the Pacific Northwest, 13,000 miles of BLM-managed streams are vital to annual runs of salmon and steelhead trout, as are more than 100,000 miles of streams in Alaska. In the Southwest, BLM waters feature species such as bass, catfish and pupfish. During Fiscal Year (FY) 1991, the BLM spent \$3.6 million on fisheries and related riparian-wetland habitat management, an increase of 70 percent from the previous year.

Goal 1 : Anadromous Fish Habitat

Provide and enhance the fisheries potential of anadromous fish streams in the Pacific Coast drainages so as to further contribute to the public use and enjoyment, and to the economic stability of coastal communities and to the recreational and commercial fishing industries.

The BLM is implementing its plan, *Anadromous Fish Habitat Management on Public Lands*, which outlines an ambitious 12-year program to annually increase production of adult salmon and steelhead trout to 172,000 fish in Idaho, Oregon, California and Alaska. This will return \$2.50 for every dollar invested.

In Oregon, 42 of 84 proposed projects have been completed. This includes completion of 2,118 in-stream structures, 42 off-channel habitat development projects, 193 rearing pools, and 13 fish passage projects. Other projects include the following.

- In the Kobuk District of Alaska, numerous field tours and media interviews have been conducted to publicize fishing potential on streams feeding Norton Sound. The BLM manages virtually every major stream in the area. The recently completed Norton Sound Habitat Management Plan covers 6 million acres.
- Construction of a 3,400 foot-long channel along the Trinity River in California to enhance anadromous fish rearing habitat.
- Completion of a coho salmon project in cooperation with the Middle Rogue Chapter of the Northwest Steelheaders on Deer Creek, a tributary of the Illinois River, to enhance anadromous fish rearing habitat.
- Completion of Brewster Gorge fish passage to extend spawning of steelhead trout and coho salmon another 17 miles upstream.
- Completion of the Tioga Creek Anadromous Fish Enhancement project in the BLM's Coos Bay District in Oregon to improve spawning and rearing habitat for steelhead.
- Restoration of 5.5 miles of Wolf Creek in Oregon to benefit pool habitats for coho salmon. This was a cooperative effort between the BLM, the Oregon Department of Wildlife, the Umpqua Fishermen's Association and Roseburg Lumber Company.
- Completion of the Anadromous Fish Habitat Management Plan for the Columbia and Snake River Basin. This plan outlines a dynamic series of actions to restore spawn-

ing and rearing habitat for the various populations of salmon, steelhead trout and sea-run cutthroat trout that could face extinction in portions of the Basin managed by the BLM in Idaho, Oregon and Washington.

Goal 2: Resident Fish Habitat

Manage habitat for resident species that spend all or part of their life cycles on public lands and that are of high economic, social, or scientific value to local communities or the Nation. This includes both warm and cold water resident species, such as bass, rainbow and cutthroat trout, and fishes in the desert Southwest.

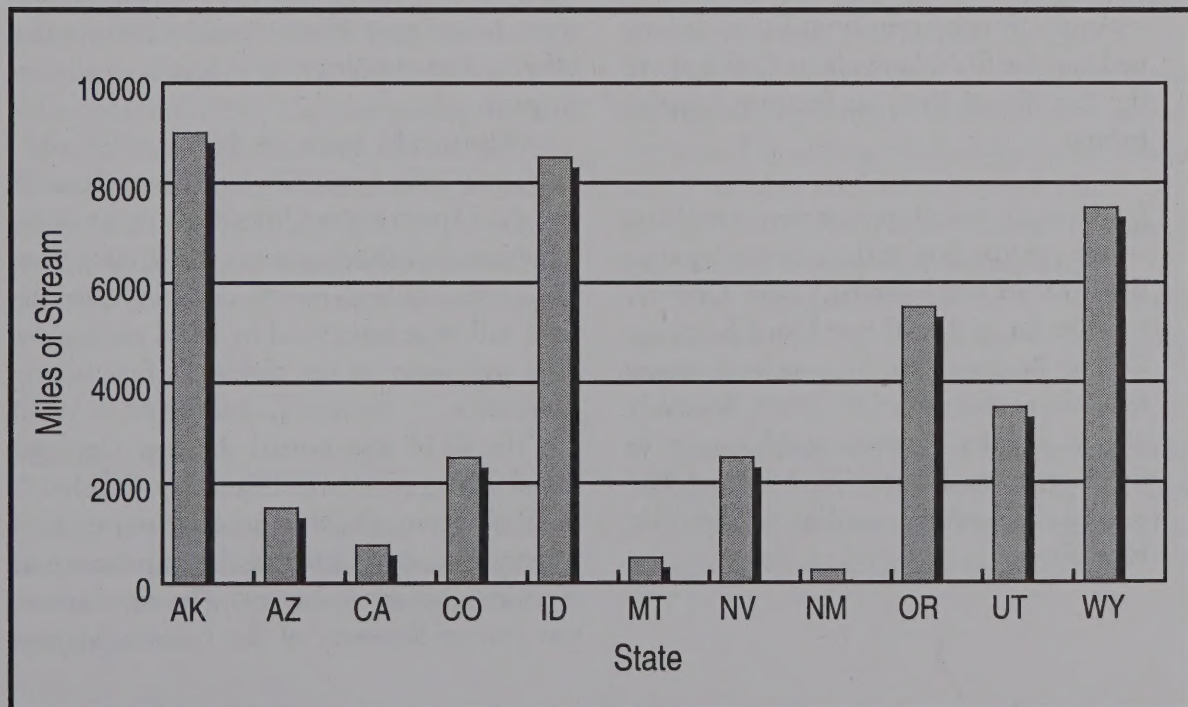
Resident fish habitat is another aspect of the BLM's efforts on behalf of fish resources. There is a wide assortment of other species and habitats that occur on BLM lands. The springs and small ponds on low-elevation deserts in Idaho mark one end of the habitat range while alpine lakes are on the other. The only known populations

of several fish species occur in small pools on isolated BLM lands. The BLM's goal is to keep these diverse habitats healthy and producing, no matter what their size or use might be.

Progress has been made in implementing recommendations contained in the Fisheries Habitat Management Strategy Plan. This document consists of findings, recommendations and strategies for strengthening the BLM's fisheries program and on-the-ground management of fish resources. Some recent accomplishments follow:

- In Arizona's Yuma District, fish habitat for bass and other warmwater species has increased as a result of sinking unsold Christmas trees into the backwaters along the lower Colorado River.
- In Minnesota's Milwaukee District, the Minnesota Department of Natural Resources and the BLM are developing a joint recre-

Miles of Fishable Streams on BLM Land by State.



Source: WFIS/FY90 Public Land Statistics Data Base (3/15/91).



Fishing lessons start the day at Squaw Lake

ational fishing conservation display for the islands in Vermillion Lake.

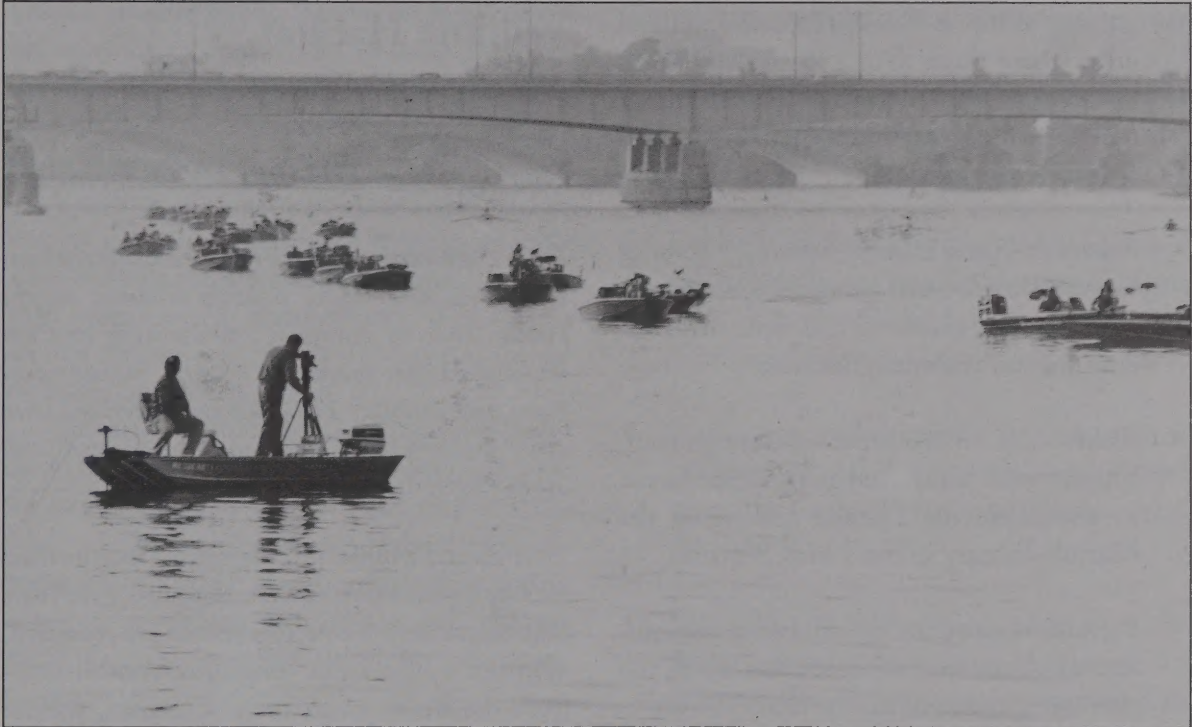
- In Idaho's Shoshone District, willows were replanted by volunteers from Trout Unlimited and the BLM Idaho State Office along the Big Wood River to increase fisheries habitat.
- In Montana, several projects were completed — the construction of the 4.5-acre Fritzner Reservoir in northeastern Fergus County; completion of the 50-acre foot Champam Coulee Reservoir for fisheries and waterfowl; the restoration of the Butch Reservoir dam, a popular recreational fishing site in the Lewistown District, and habitat improvements for Arctic grayling along the Big Hole River.

Recreational Fishing

In 1991, nearly 3,700 people participated in 30 BLM National Fishing Week events Bureau-wide. Most State Offices expanded festivities by offering free camping opportunities to all participants.

Of particular merit are the Yuma District's fishing clinic for special Olympians ages 10 to 35 and the Eastern States Office's fishing event for disadvantaged children from the Washington, D.C., area. At both events, children fished the river and were supervised by BLM employees. This was many of the children's first fishing experience.

The BLM also hosted the first Congressional fishing tournament Saturday, October 5, in Washington, D.C., to promote the value of fishing as a recreation and the importance of America's fishery resources. The tournament was part of Secretary of the Interior Manuel



BLM's Ranger Flotilla on the Potomac River at the First Congressional Fishing Tournament

Lujan's "Enjoy Outdoors America" program that encourages all Americans to enjoy and conserve the Nation's natural resources.

Many BLM State Offices used the "Fishing Has No Boundaries" theme from the national agreement signed with Amerifish Corporation in December of 1990. This partnership, formed with the BLM, the Fish and Wildlife Service, National Park Service, Bureau of Reclamation, the Forest Service and Amerifish Corporation, is providing fishing opportunities for disabled anglers and educational materials on recreational fishing.

Goal 3: Riparian-Wetland Management

Manage riparian-wetland areas to achieve a healthy and productive condition for long-term benefits and values, in concert with the range and watershed programs.

The BLM's Fish and Wildlife Program has been an active leader in meeting the Director's goal of achieving proper functioning condition of 75 percent or more of the riparian-wetland habitat on public land by the year 1997.

Fisheries are benefitted by increasing riparian vegetation growth to shade and cool surface waters and by adding woody debris to streams to create valuable pool habitat which catch sediments, remove them from the water column, and decrease erosion from streambanks.

Some examples of how the BLM pursued aggressive restoration of riparian-wetland areas in 1991 include:

- Arizona, where Boy Scout volunteers planted hundreds of cottonwoods along the San Pedro River in the San Pedro National Riparian-Wetland Conservation Area.

- Arizona's Empire-Cienega Riparian-wetland area, where more than 150 students from grades 5-8 planted cottonwood seedlings and learned how to protect riparian-wetland habitats from erosion.
- Arizona's Yuma District, where 15 acres of non-native salt cedar along the lower Colorado River were cleared and replanted with cottonwood and mesquite trees.
- California, where riparian revegetation projects were conducted along Cedar Creek in the Susanville District and along the Mattole Estuary in the Ukiah District.
- Nevada, where grazing patterns were modified or eliminated in some areas along the riparian corridor of the St. Mary's River.

Wildlife Habitat Management

Goal 1: Overall Habitat Management

Ensure optimum populations and a natural abundance and diversity of wildlife resources on the public lands by restoring, maintaining and enhancing habitat conditions through management plans and actions. The goals are integrated with other uses of public lands and coordinated with other programs and the States.

Fish and wildlife improvements require time for implementation and completion. Five years may elapse before concrete results are recorded. Without a substantial long-term commitment from the BLM, its partners, Congress, private



San Pedro Riparian Area showing lowlands and uplands in the early morning

citizens and the public, habitat on public lands will continue to deteriorate. In some instances, abandoning a fish or wildlife project could be potentially more damaging than not starting a project initially.

Resource Management Plans (RMP's) outline long-term objectives for large geographic areas and balance fish and wildlife requirements with other existing resource uses. The RMP's are the framework for developing and implementing land use activities.

Fish and Wildlife Activity Plans called Habitat Management Plans are the building blocks for the more general goals identified in the RMP's. These plans include Habitat Management Plans (HMP's), Coordinated Resource Management Plans (CRMP's), and management plans for Areas of Critical Environmental Concern (ACEC).

Of the 732 HMPs initiated thus far, 63 have been implemented and 610 are being implemented. About \$64 million is required to complete these HMP's.

Nongame Birds

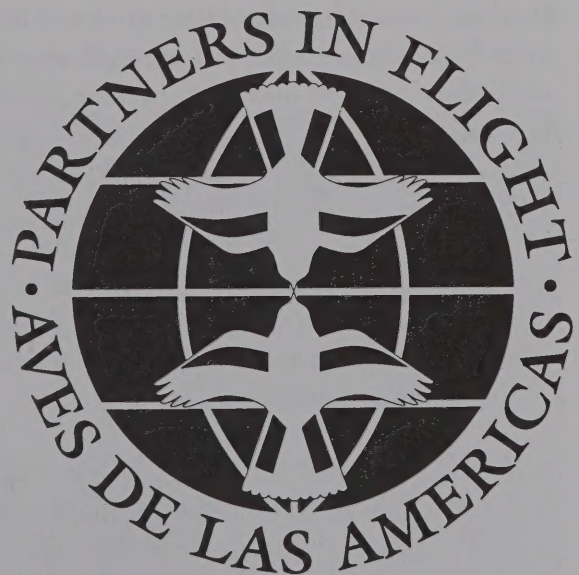
In December 1990, the National Fish and Wildlife Foundation, the BLM and various other Federal organizations and national agencies joined in a partnership to focus attention on the declining populations of nongame birds that nest in the United States and winter in Central and South America. This interagency task force, known as *Partners In Flight - Aves De Las Americas*, was the catalyst for BLM's Nongame Bird Habitat Conservation Strategy Plan.

Managing neotropical and other nongame migratory birds is an integral part of *Fish and Wildlife 2000*. The BLM's nongame bird strategy is designed to maintain viable populations of nongame birds and their habitats and to reverse

diminishing populations of those species that are declining.

During 1991, the BLM has been involved in a variety of habitat management activities that benefit nongame birds.

- Off-highway vehicle routes have been closed and rehabilitated in several sensitive areas such as in the Great Falls Basin and San Sebastian Marsh in California.
- Native trees and riparian vegetation such as cottonwood and willow trees were planted along the Colorado River in Colorado and Arizona.
- More than 45,000 acres of prime riparian-wetland habitat have been inventoried in Arizona's San Pedro River drainage to identify key neotropical nongame bird habitats. Selected species and habitats of nongame birds continue to be monitored.



Partners in Flight Logo

- Riparian-wetland areas have been fenced along Arizona's Cienega Creek in Tucson and Tule Creek in Phoenix.
- In California, Colorado and Arizona, nest boxes and nesting platforms have been constructed.
- In Arizona, livestock grazing systems have been redesigned, benefiting the habitat of the rare common black hawk.

Watchable Wildlife

The BLM led the development of an interagency agreement on Watchable Wildlife signed in December 1990. This program features a major network of wildlife viewing sites and State-by-State viewing guides which provide travelers and wildlife enthusiasts with tips on the best places to view and photograph wildlife.

Of the first guides completed (Oregon, Montana, Utah and Idaho) 67 of the 422 sites listed are on BLM lands. Other guides in the series are nearing completion, while inventory and evaluation is still under way in some States. To date, 159 BLM sites have been officially designated. Some of the more exciting watchable wildlife areas include:

- The Galesville Reservoir in the BLM's Medford District in Oregon highlighting osprey and waterfowl viewing and educational opportunities.
- The Deans Creek Elk Viewing Area in the BLM's Coos Bay District in Oregon, which is the premier Roosevelt elk viewing site in the Pacific Northwest.
- The Georgetown Wildlife Viewing Area in the BLM's Canon City District in Colorado, featuring bighorn sheep that browse

on nearby mountain terrain as the travelling public cruises on Interstate 70.

- The Goshute Mountains Raptor Migration area in BLM's Elko District features the annual fall migration of thousands of raptors including bald eagles, goshawks, and peregrine falcons.

Animal Inn

Animal Inn is a nationwide initiative to educate the public about the importance of dead and fallen trees to fish and wildlife. Nearly a third of all forest creatures depend on snags and other dead or destroyed trees for their survival. In June 1991, the BLM signed a national agreement with the Forest Service, American Forest Council, National Forest Products Association, National Fish and Wildlife Foundation, National Association of State Foresters and the National Woodland Owners Association. This agreement sets the stage for future partnership efforts to preserve selected trees for wildlife.

Mining Claim Markers

When the BLM was informed that perforated plastic pipe, used as mining claim markers, was trapping small birds and other animals, the agency implemented a policy directing field offices to work with appropriate State agencies and miners to eliminate the associated mortality. Although the marking of mining claims is under the jurisdiction of State laws, which vary across the country, the BLM has acted to preclude the future use of perforated and uncapped pipes in all States through its State-by-State coordination policy.

Goal 2: Big Game/Upland Game

Ensure that big game/upland game species on the public lands are provided habitat of sufficient

quantity and quality to sustain identifiable economic and/or social contributions to the American people.

In early 1991, an interdisciplinary team comprised of representatives of Western State wildlife agencies, selected big game organizations and BLM managers and biologists was organized to formulate a national strategy for managing big game habitat. Of particular concern is minimizing potential conflicts with livestock grazing and mining.

In 1991, the BLM completed many projects benefiting big game and upland game birds.

- 20,000 bitterbrush seedlings were planted in Idaho's Shoshone District to rehabilitate mule deer and elk winter ranges destroyed by wildfire.
- Elk were reintroduced into the Peavine Mountain Area in the Medford District of Oregon.
- A cooperative initiative with the Rocky Mountain Elk Foundation will provide valu-

able information for elk populations and habitat as it relates to forest resource management of Federal, State and private lands. This is the first attempt in Montana to address elk needs over large forested areas.

- The development of new water sources for antelope in cooperation with the Arizona Department of Fish and Game and the One Shot Antelope Club will enhance habitat conditions and encourage antelope to repopulate historic habitats in that State.
- A prescribed burn conducted in Colorado will refurbish forage conditions on 600 acres of winter and transition habitats for elk. Located in the Glenwood Springs Resource Area, this project was completed in cooperation with the Colorado Division of Wildlife, the Rocky Mountain Elk Foundation and the Forest Service.

Desert Bighorn Sheep

Since the implementation of the BLM's Desert Bighorn Sheep Rangewide Plan in late



Georgetown, Colorado Watchable Wildlife viewing area for desert bighorn sheep

1987, more than 115 new water sources have been established; desert bighorn sheep have been introduced to 39 new areas; 26 herds have been augmented; 10 new habitat areas have been identified; and over 5 million acres of bighorn sheep habitat have been inventoried. The BLM manages 8.8 million acres or 80 percent of historic sheep habitat, of which 58 percent has been inventoried.

During 1991, the BLM, in cooperation with State wildlife agencies and bighorn sheep conservation groups, established 10 new water sources; reintroduced bighorns into 6 historic habitat areas; augmented 6 herds; and inventoried 2.3 million acres of sheep habitat.

The BLM teamed up with the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to reintroduce California bighorn sheep to three areas in Oregon's Sheephead Mountains, located approximately 100 miles southeast of Burns, Oregon. Fifteen bighorn sheep were placed within the Diablo Peak Wilderness Study Area, 15 sheep were taken to Coleman Rim, and 11 bighorns were

flown to Sheep Rock. Before their arrival, guzzlers funded by the BLM, Oregon and the Foundation for North American Wild Sheep were installed by volunteers from the Eugene Chapter of the Izaak Walton League.

During a June 1989 symposium in Reno, Nevada, on Bighorn-Domestic Sheep Diseases, a Western Wildlife Disease Cooperative was proposed to be affiliated with the Western Association of Fish and Wildlife Agencies. The Western Association agreed to the proposal and the Disease cooperative will be established in 1992. Disease complications for desert bighorn sheep have been prolific in the past, and it is important that BLM biologists apply the most current information on wildlife diseases in their onsite management of the animals.

Upland Game Birds

More than 23 species of upland game birds, including several species of desert quail, sage grouse, chukars, and wild turkeys, are found on BLM lands. A national strategy plan for manag-



Roosevelt Elk



Columbian sharptail grouse on public land near Weiser, Idaho

ing habitats of these species will be available in 1992. Some ongoing examples of management are highlighted below.

In New Mexico, Marathon Oil Company is constructing three water units for Least Prairie Chickens as a mitigation measure for disturbance caused by oil and gas drilling. Wild turkeys were reintroduced into the Laguna Seca Special Management Area.

In Idaho, more than 14,250 acres of sage grouse habitat were seeded to rehabilitate an area burned by wildfire in the Thorn Creek area of the Bennett Hills Resource Area.

In Idaho, Pheasants Forever, the Idaho Department of Fish and Game and the BLM inven-

toried 20 isolated tracts to determine habitat improvement opportunities for upland game birds, including dry land planting for nesting cover and riparian plantings for winter cover.

In Oregon, sharp-tailed grouse were reintroduced in the Vale District. This cooperative effort also involved the Oregon Department of Fish and Wildlife, The Nature Conservancy, and the Forest Service.

Goal 3: Waterfowl Habitat Management

Help perpetuate a diversity and abundance of waterfowl for the Nation by managing wetlands and other habitats on the public lands.

The BLM manages 24 million acres of riparian-wetlands. *Waterfowl Management on Public Lands* is the BLM's national strategy plan designed to expedite management of 225 key waterfowl areas. This plan is currently being implemented. The BLM also is expanding its role in wetland conservation and implemen-

tation of the North American Waterfowl Management Plan.

The BLM's Wetland Environments Today and Tomorrow (WETT) strategy provides the framework for implementing on-site management and cooperation between Ducks Unlimited (DU) and the BLM. This partnership will promote and enhance the public's understanding of the crucial role wetlands play. The final version of WETT will be available in 1992.

Projects with DU totaling over \$1 million are being implemented in five States. In Alaska, a 5-year agreement between DU and the BLM for wetland inventory and mapping is nearly completed.

.....

In Montana, the BLM cooperated with DU in a dam reconstruction project in the Lewistown District that created an additional 40 acres of aquatic habitat and 100 acres of nesting habitat.

In Idaho, the BLM worked with DU and the Idaho Department of Fish and Game to construct 11 miles of fence to enhance waterfowl nesting and brooding habitat along the South and Henry's Fork of the Snake River. The Thousand Springs/Chilly Slough area was selected by the North American Wetlands Conservation Council to receive a \$125,000 grant for acquisition of adjacent wetland habitat.

Goal 4: Raptor Habitat

Provide suitable habitat for birds of prey on public lands through the conservation and management of essential habitat components, including prey species. Attention is focused on areas where birds of prey concentrate during some period of the year, or

in important habitats where populations are suppressed.

The BLM's 1989 Raptor Habitat Management Strategy Plan identified 223 key raptor areas encompassing 13.5 million widely-scattered and distinct acres of public lands. Protecting these unique habitats is the key to maintaining the populations of 45 raptor species that inhabit the public lands in the West. Of equal concern is sustaining populations of prey species.

In 1990, the BLM, in conjunction with Boise State University, The Peregrine Fund, the Idaho Department of Fish and Game, the U.S. Fish and Wildlife Service (USFWS) and other public and private organizations established the Raptor Research and Technical Assistance Center (RRTAC) in Boise, Idaho.

The RRTAC is coordinating a multi-million dollar, 5-year research project to assess



©Wendy Shatt/Bob Rainski/Tom Slack & Associates

The BLM manages 223 key raptor areas on 13.5 million acres

habitat alteration in the Snake River Birds of Prey Area (SRBOPA). The study is designed to evaluate the impacts of military exercises in the Idaho National Guard's Orchard Training Area, as well as to accumulate information on the effects of wildfire and grazing on the area. Studies on global warming and raptor and raven nesting on power lines are also being conducted. Pacific Power and Light Company is a key cooperator.

BLM field offices also have implemented a variety of raptor projects. Some of these include:

- In New Mexico, the BLM conducted an evaluation of raptor habitat along the Rio Grande Gorge and developed monitoring activities.
- In Idaho, the Burly District, in cooperation with RRTAC and Boise State University, inventoried 20,000 acres of active ferruginous hawk nesting sites and collected information on the productivity of successful nests.
- In Arizona's Kingman Resource Area, an inventory and monitoring effort is under way to determine Mexican black hawk use of riparian-wetland habitat. One of the areas being monitored supports the highest density of nesting black hawks in the United States.

Goal 5: Riparian Management

Riparian areas are the bands or strips of green near streams, springs, lakes, and other sources of water. These areas are among the most important lands

managed by the BLM. In some areas, more than 80 percent of wildlife depend on riparian areas for food, water and shelter. Such areas also provide vital habitat for fish. Examples of ongoing management activities are presented in the Fisheries Habitat Management component of this report.

Threatened and Endangered Species Component

Increase populations of threatened and endangered plants, fish and wildlife on lands managed by the BLM and restore species and populations to historic levels, consistent with BLM land use plans, after consultation with Federal and State wildlife agencies.

The BLM's goals for threatened and endangered species are outlined in *Fish and Wildlife 2000*. Available funds are spent on species that present special problems or that seriously affect other resources. The desert tortoise and northern spotted owl are two such examples.

Special Status Plants

Some 53 Federally listed threatened or endangered plant species occur on BLM land, while another 1,102 species are candidates for listing. A national strategy for managing special status plant species is nearing completion.

During 1991, the BLM expanded its technical field staff by hiring botanists to inventory and monitor these plants.

Inventory continues to be the major focus in the field since there is very little information available in most areas as to species occurrence

Breakdown of Federally listed threatened and endangered species on BLM lands, 1991.

Plants	Fish	Mammals	Birds	Amphibians	Reptiles	Invertebrates	Total
53	39	29	23	4	10	4	162



Through a Challenge Cost Share Partnership with the Montana Natural Heritage Program, the public lands in southwest Montana have been inventoried and several candidate plant species have been identified for possible Federal listing

and location. During 1991, more than 300,000 acres of inventory have been completed. This work already has resulted in the discovery of several new populations of plants including:

- Several new populations of the Carmel Valley mallow near King City, California.
- Four new populations of the San Benito evening primrose in California.
- Three new populations of the candidate species *Ivesia shelleyi* in south-central Oregon nearly 60 miles from the previously known population.
- A new population of the candidate species *Thelyodium eucosmum* near Prineville, Oregon, doubling the previously known population size.
- Nineteen new populations of the BLM-sensitive *Limnanthes gracilis* near Roseburg, Oregon.
- One new population of *Caluchortus* near Myrtle Creek, Oregon.
- The rediscovery on BLM lands in Oregon's Vale District of golden buckwheat, a species long thought to be extinct. Succeeding surveys have determined that this is a healthy but isolated population of this species.
- Several new populations of Mulford's milk-vetch in the Vale District in Oregon.
- Ten new populations of Todsens' penny-royal on BLM lands in the Sacramento Mountains of New Mexico.
- Several new populations of the endangered Kuenzler's hedgehog cactus, on Fort Stanton in New Mexico.
- Several new populations of Harrington's penstemon and Wetherly's astragalus in Colorado's Grand Junction District.

Inventory and monitoring of special status plants is increasingly being accomplished in partnership with diverse organizations. The BLM and The Nature Conservancy are collaborating in several States to complete inventories on rare plants and plant communities. A monitoring study of the Gypsum scalebroom is under way in the Caballo Resource Area of New Mexico in cooperation with New Mexico State University. The Center for Plant Conservation is working with the BLM to complete a population study of the Todsen's pennyroyal, a Federally endangered plant on BLM lands in New Mexico.

New Mexico's Caballo Resource Area also has developed a plan for habitat management of the Gypsum scalebroom, a candidate species for Federal listing. Gypsum scalebroom occurs only in the gypsum dune habitat in New Mexico and Texas. The New Mexico Native Plant Society and New Mexico State University are collaborating with the BLM on this effort.

During 1991, the BLM cooperated in an annual survey of the Federally endangered Sneed's pincushion cactus, which is now abundant and could soon be removed from the endangered species list.

BLM lands harbor more than 114 natural plant communities. Together, they represent more ecosystems and biological communities than are managed by any other Federal agency.

Threatened and Endangered Fish

The BLM manages habitat for 113 special status species of fish, including 39 listed as threatened or endangered. A national strategy for managing these species was completed in 1991.

During 1991, four BLM States - Idaho, Arizona, New Mexico and Oregon - completed several field projects for restoring and enhancing threatened and endangered fish. Some of these include the following.

- Cooperating with the USFWS and Idaho State University to manage the Bruneau Hot Springs snail and three different species of mollusks.
- Improving the habitat for the redband trout in partnership with the Idaho Chapter of Trout Unlimited.
- Improving habitat at Mesquite Springs in Arizona for the introduction of the desert pupfish.
- Surveying stock ponds and the Cienega Creek watershed for exotic fishes competing with the Gila top minnow in cooperation with the Arizona Game and Fish Department. The survey found no new threats to top minnow populations.
- Reestablishing the Rio Grande cutthroat trout in Warm Springs Canyon, New Mexico.
- Implementing the Warner sucker recovery plan in partnership with The Nature Conservancy and the USFWS. Severe drought has reduced water levels necessitating the removal of suckers from Hart Lake in Oregon and their placement in protected areas. Volunteers were instrumental in the continuous monitoring of the species' adaptation to its changed environment.

Northern Spotted Owl

The vast majority of habitat for the northern spotted owl occurs in northern California and western Oregon. Since being listed as Federally threatened throughout its range in 1990, the bird continues to receive extensive media coverage and management attention.

The BLM in California continues to conduct inventories and monitor the 13 known

territories on BLM lands in the Arcata Resource Area. In Oregon, all BLM districts in the western portion of the State are involved in a variety of projects including basic inventories, demographic studies, long-term monitoring, timber sale clearances, and consultations with the USFWS. In 1991, BLM biologists completed over 4,000 owl site visits where 1,400 owls were observed.

In 1991, inventory and monitoring on BLM Oregon lands revealed 486 pairs of northern spotted owls that produced 3,329 young. BLM biologists banded 695 birds in 1990 including 442 adult and subadult birds, as well as another 253 juveniles. Since 1983, over 2,000 spotted owls have been banded by BLM biologists.

The expansion of density-demographic studies in five western Oregon districts increased owl count accuracy. The BLM's improved inventory techniques are also being used by the Forest Service and the National Park Service to maintain consistency.

Mexican Spotted Owl

With the proposed Federal listing of the Mexican spotted owl as threatened in Arizona, Colorado, New Mexico and southern Utah, the BLM has begun assessing the occurrence and abundance of habitats that support this species. In 1991, nearly all efforts focused on extensive inventories of high probability sites. More intensive surveys will be conducted where the owl has been located. The Mexican spotted owl occupies different types of habitat than the northern spotted owl.

Desert Tortoise

The BLM has continued implementation of its rangewide plan for managing habitat of the desert tortoise in Arizona, California, Nevada and Utah. Each State has categorized habitat according to its importance, continued to monitor desert tortoise populations and habitat, and conducted research.

The BLM has continued to consult closely with the USFWS to ensure that all BLM actions comply with the requirements of the Endangered Species Act. In Arizona and California, the BLM has required the construction of tortoise proof fences and the installation of culverts and bridges to aid tortoises in crossing roads. In Nevada, the BLM has cooperated with Clark County and the city of Las Vegas to compensate for the loss of tortoise habitat caused by housing construction. In California, the BLM, in cooperation with other agencies and private landowners, is involved in a regional management plan for the Western Mojave Desert. The plan involves 10 cities and towns, 4 counties and 12 State and Federal agencies and private groups. In addition, significant modifications in livestock grazing procedures are occurring in some desert tortoise habitat areas.

Black-footed Ferret

Black-footed ferrets, among the rarest mammals in the world, depend on prairie dogs for food and their burrows for shelter. To fully comply with the Endangered Species Act, the BLM manages prairie dog ecosystems as habitat for future releases of black-footed ferrets. More than 100 vertebrate species live in these unique areas.

The first release of captive bred ferrets into the wild occurred September 1991 in Shirley Basin, Wyoming. The BLM is evaluating other suitable reintroduction sites in Wyoming, Colorado, Utah and Montana. Over 75,000 acres of potential habitat was inventoried in 1991 in preparation for additional releases in 1992 and beyond.

An interagency team of biologists in Montana has been conducting one-on-one interviews with more than 100 private landowners on possible reintroduction sites in Montana. By building private landowner support, BLM resource managers have been successful in mitigating concerns and improving recovery efforts for black-footed ferrets.

Partnerships

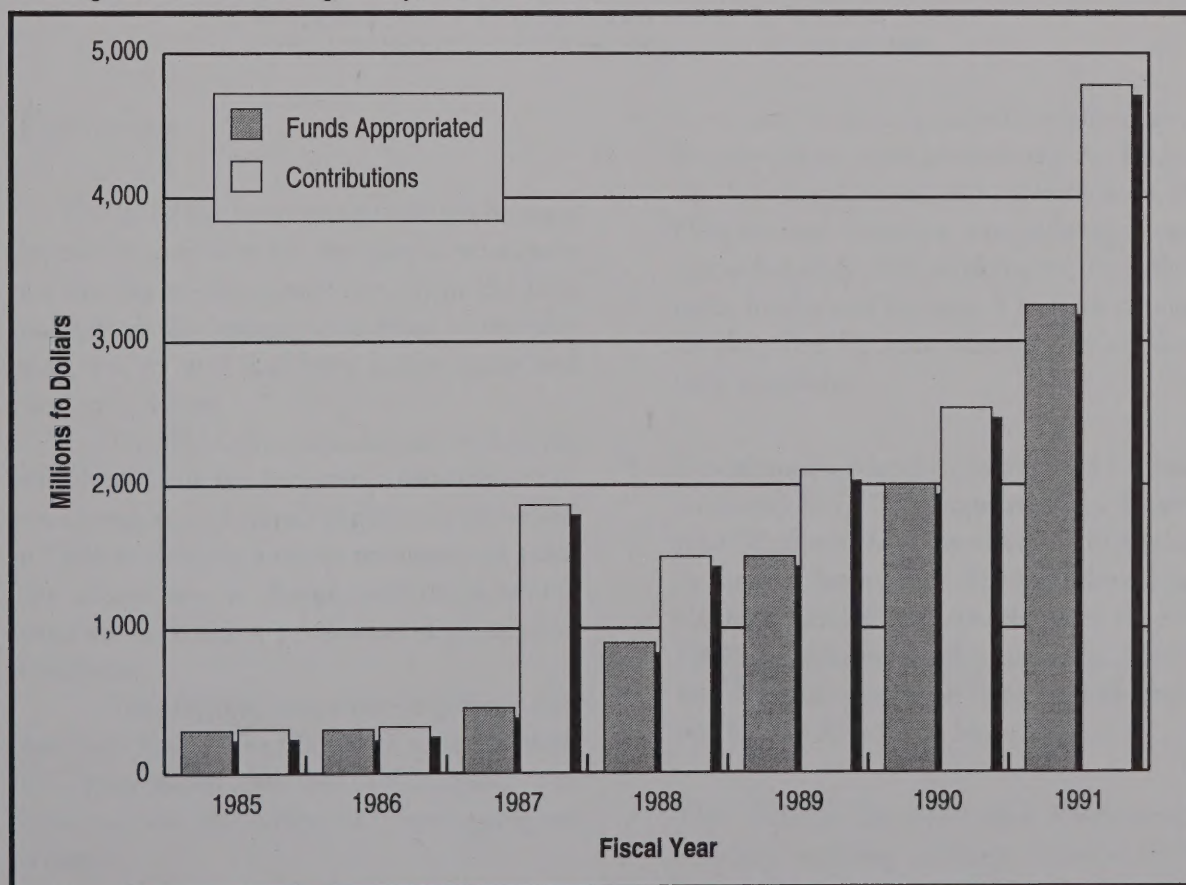
The BLM's partnerships and cooperative efforts toward improving wildlife and fish habitat are some of the most outstanding facets of the implementation of Fish and Wildlife 2000. The BLM has strengthened its traditional ties with State fish and wildlife agencies, as well as other Federal agencies, in implementing the plan. During the last 2 years, the BLM has signed national level agreements with a number of organizations and is currently planning more.

These organizations have participated in national agreements with the BLM:

American Fisheries Society
American Forest Council
American Museum of Natural History,
Turtle Recovery Program

Amerifish Corporation
Center for Plant Conservation
Defenders of Wildlife
Ducks Unlimited
Foundation for North American Wild Sheep
International Association of
Fish and Wildlife Agencies
The Izaak Walton League of America
Mule Deer Foundation
National Audubon Society
National Association of State Foresters
National Fish and Wildlife Foundation
National Forest Products Association
National Rifle Association
National Wildlife Federation
National Wild Turkey Federation
Peregrine Fund

Challenge Cost Share Funding History, BLM 1985-1991.



Pheasants Forever
Quail Unlimited
Rocky Mountain Elk Foundation
The Nature Conservancy
Times-Mirror Magazines
Conservation Council
Trout Unlimited

Another tangible aspect of these partnership agreements is the BLM's Challenge Cost Share Initiative. The BLM earmarks project money and State agencies, conservation groups, or private citizens donate matching funds and/or supply "in-kind" material and labor.

The success of this initiative is summarized in a separate report, *The Challenge Cost Share Initiative*.

An excellent example involves two quail habitat improvement projects along Walker Ridge within BLM's Clear Lake Resource Area in California. This area received a face lift from

members of the Sacramento Chapter of Quail Unlimited in March 1991. Chapter volunteers cooperated with BLM biologists in clearing thick brush invading an existing fiberglass wildlife guzzler which had become overgrown since its installation in 1984. Brush cutters and chain saws slashed pathways through the thick scrub oak to facilitate access for deer and quail. The cut brush was then stacked into piles to provide escape cover for the quail using the guzzler.

Repairing the water system at Cold Springs Meadows was a more difficult task. The system, inoperative for several years, supplied water for a nearby campground and a wildlife drinker that had been damaged by vandalism. Using a ditch witch, a trench was dug and new water lines were laid from the spring source to both the campground and the wildlife drinker. The damaged walls of the drinker were rebuilt and the water lines reconnected.

Human Resource Management



Director Cy Jamison at BLM's booth at the National Elk Foundation Exhibit held by the Rocky Mountain Elk Foundation in Denver, February 1991

Training

The BLM has long recognized that its most important resources are the people who carry out the day-to-day operations...from the field biologist in the resource area office to the program leaders and managers in the State and National Offices.

To address the human needs within the wildlife and fisheries program, a team of specialists, managers, and outside experts was assembled in 1986 to develop a career management plan. The intent was to design and implement a program to build a productive and satisfied workforce.

Training is an area where improvements have been made. The Phoenix Training Center (PTC) has played a key role in this regard. The following examples summarize training progress to date.

- In support of riparian restoration efforts and in cooperation with landowners, the Phoenix Training Center held three sessions of Coordinated Riparian Area Management (approximately 263 participants) in Colorado, Alaska and Nevada. The pilot course for *Advanced Riparian Management* has also been scheduled.
- To enhance wetland and waterfowl habitat work with DU, PTC cooperated on a *Waterfowl/Wetlands Management* course in Alaska in August. Sessions for BLM employees in California and Alaska are scheduled for FY 1992. In addition, a pilot course for *Riparian/Wetlands Ecological Site Classification* was held in Arizona in May.
- The *Wildlife Economic and Productivity Analysis* training package standardizes

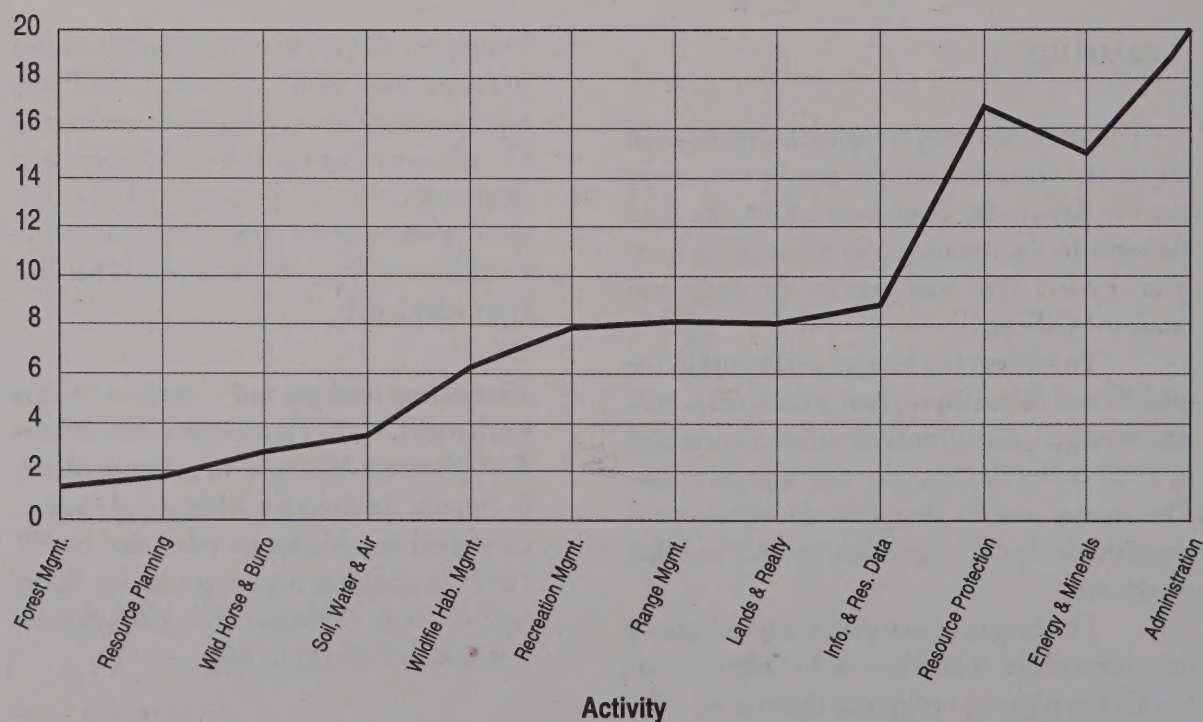
methods for wildlife economic analysis and focuses on the need to conduct benefit-cost analysis for field projects.

- *Introduction to Fisheries Management* is a course which supports the objectives of maintaining/enhancing fisheries habitat bureau-wide. Forest Service employees have also attended.
- The *Management and Consultation* course focuses on agency roles regarding Endangered Species Act activities and compliance.
- *Meeting the Biodiversity Challenge* is a course which was conducted in 1991.
- The *Wildlife and Fisheries Information System (WFIS)* course is an On-Line help program and keyboard templates to assist biologists and other system users. Approximately 20 WFIS training sessions have been held

Bureau-wide for 150 biologists and botanists who have received training in basic computer skills and data base operation. Continued emphasis is needed to get biologists and botanists "up to speed" on automated data management and use.

- To enhance program management and leadership skills of biologists and botanists, PTC held *Introduction to Administration of Fish and Wildlife Programs*. A second, more intensive course, *Advanced Leadership and Administration of Fish and Wildlife Programs* was held for the first time in Washington, D.C., in May. Some \$15,000 in cooperative funding was contributed by the National Fish and Wildlife Foundation. Some of the BLM's best fish and wildlife biologists consequently have received leadership training to further their personal careers and improve the quality of existing leaders within the BLM.

Fund Distribution for Management of Lands and Resources (Fiscal Year 91).



Source: Fiscal Year 91 Appropriation.

Note: MLR funding level: \$497 million.

Pilot Districts

The BLM's Coeur D'Alene District Office in Idaho and the Phoenix District Office in Arizona were selected as *Fish and Wildlife 2000* Pilot Districts. The intent was to establish "showcase" districts to demonstrate what can be accomplished when BLM field offices have adequate plans, funds, and staff available. District-wide implementation takes time. Both districts met or exceeded workload measures identified in their annual work plan. Specific accomplishments include hiring new field biologists; completing various habitat projects such as prescribed burns to improve habitat; establishing wildlife viewing areas; establishing census plots for neotropical migratory birds; conducting field studies on upland birds and threatened and endangered species; improving habitat for fish; and expanding cooperative work with partners.

Budget and Staffing

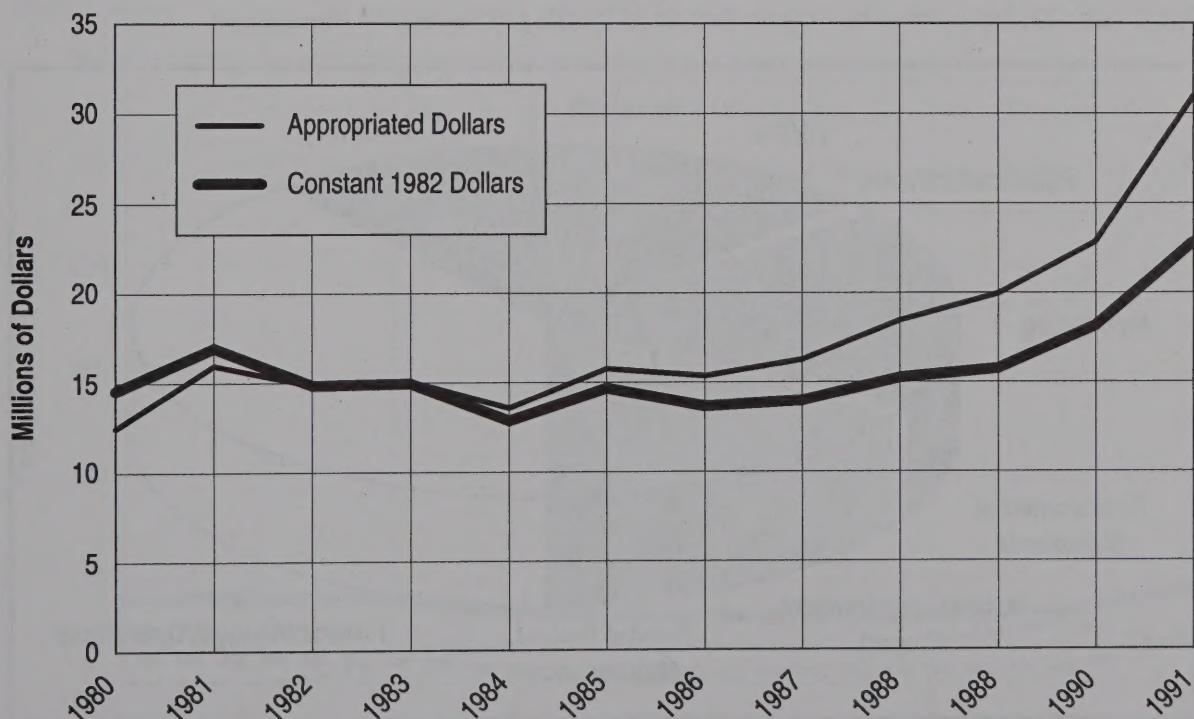
Since *Fish and Wildlife 2000* was completed, the budget for the program has increased from \$16.3 million to \$31.1 million. In FY 1991, that was 6.3 percent of the funds appropriated to the BLM under the category of "Management of Lands and Resources."

Of the \$31.1 million allocated in FY 1991, \$24.1 million was budgeted for fish and wildlife habitat management and \$7 million for threatened and endangered species.

As *Fish and Wildlife 2000* is implemented, onsite activity expenditures are expected to increase.

Staffing continues on the upswing. Emphasis is on placing biologists and botanists at the field level.

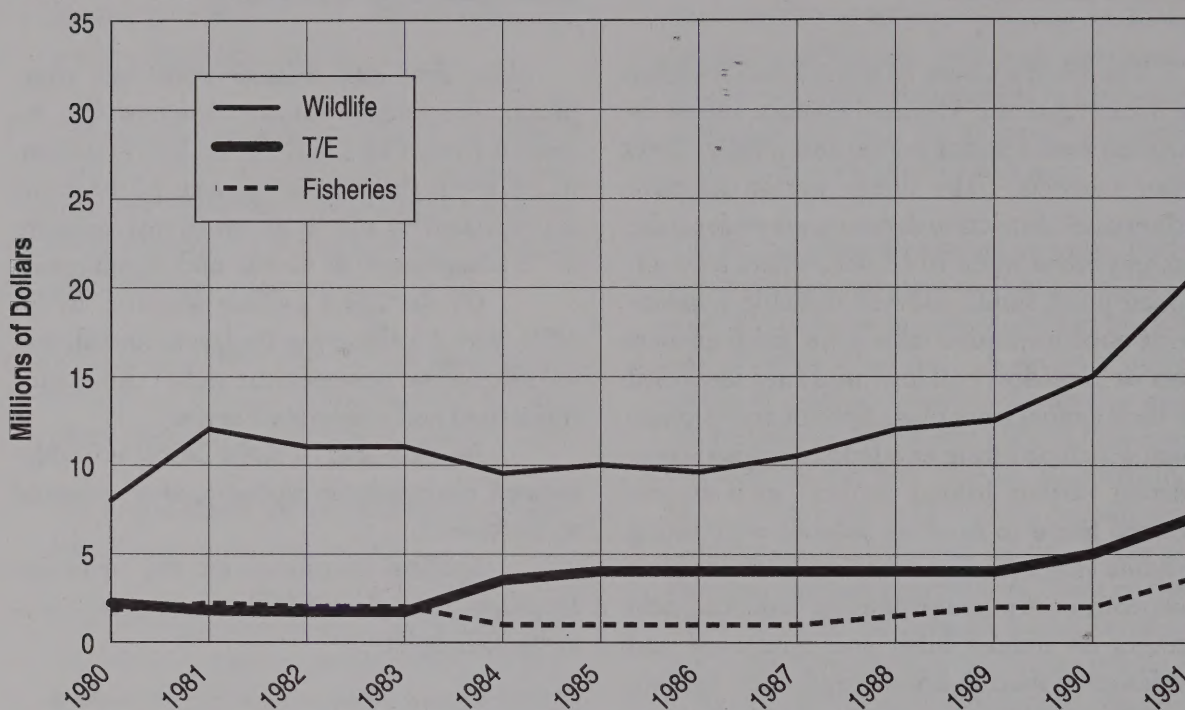
Budget History for Wildlife and Fisheries Habitat Management.



Source: Administration's Budget and Congressional Appropriations

Note: "Constant 1982 Dollars" are determined using the Presidents annual economic indicators, with 1982 equal to 100 percent.

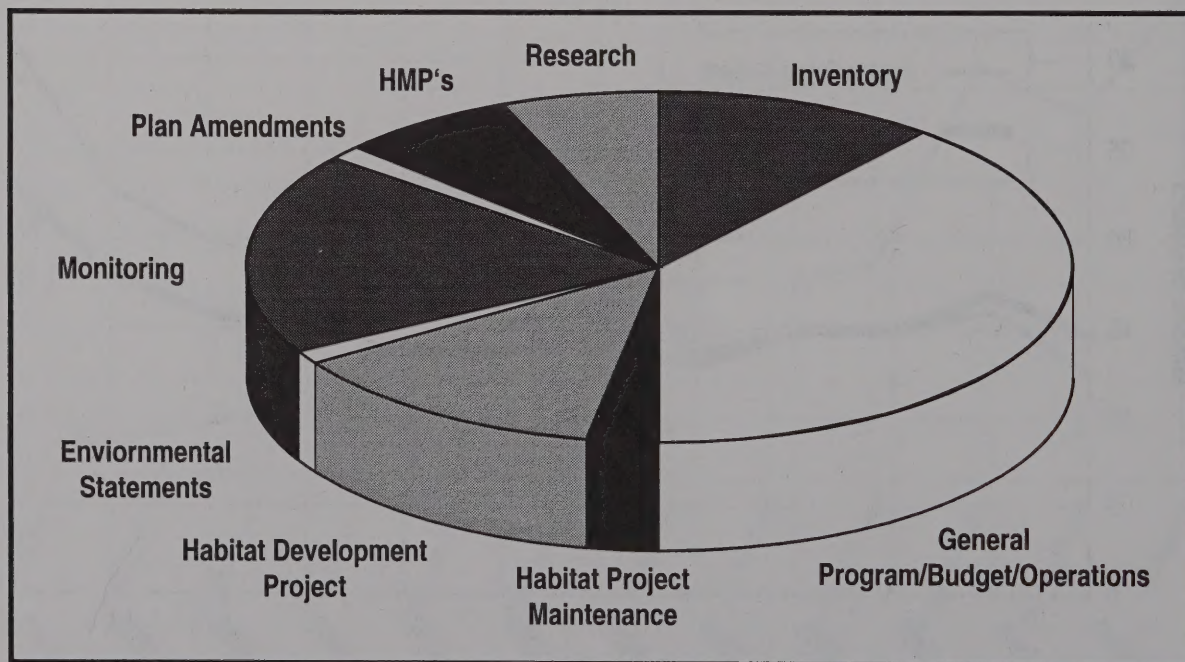
Budget History by Program Component.



Source: Annual Work Plan

Note: Fisheries funding is not tracked separately in the Financial Management System. Figures are estimates only.

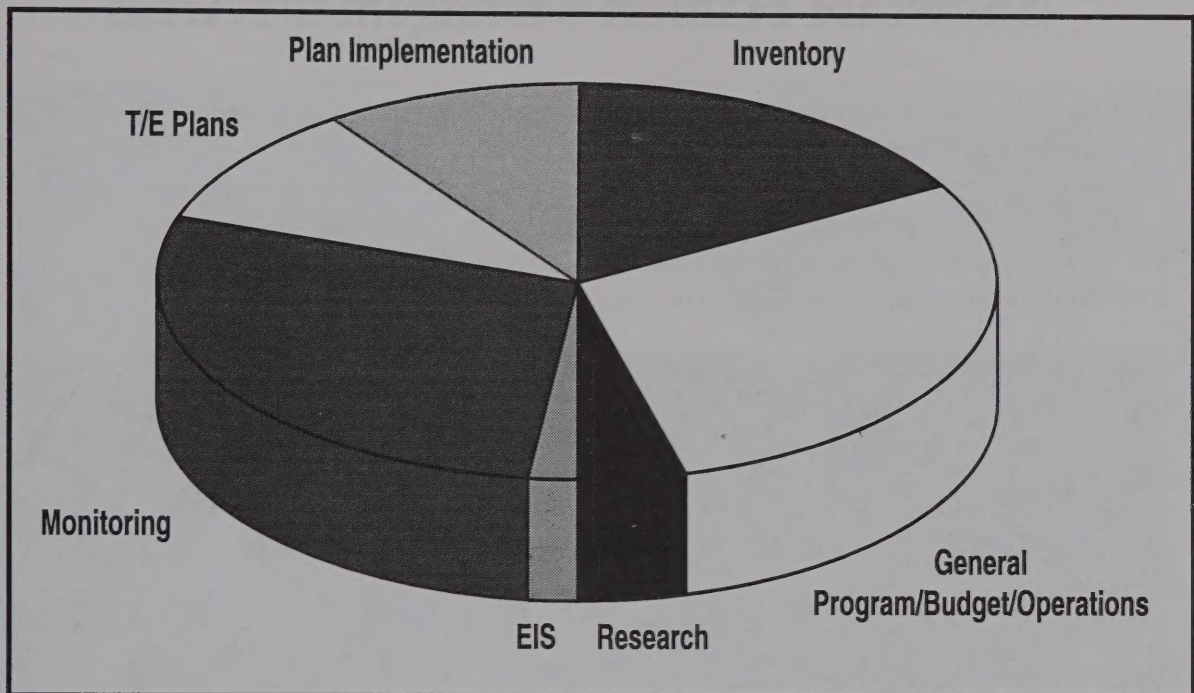
Fiscal Year 1990 Expenditures by Program Element for Wildlife and Fish Habitat Management.



Source: Financial Management System
End of Year Report.

Note: Expenditures based on fiscal year 90 budget of \$17.5 million for 4351.

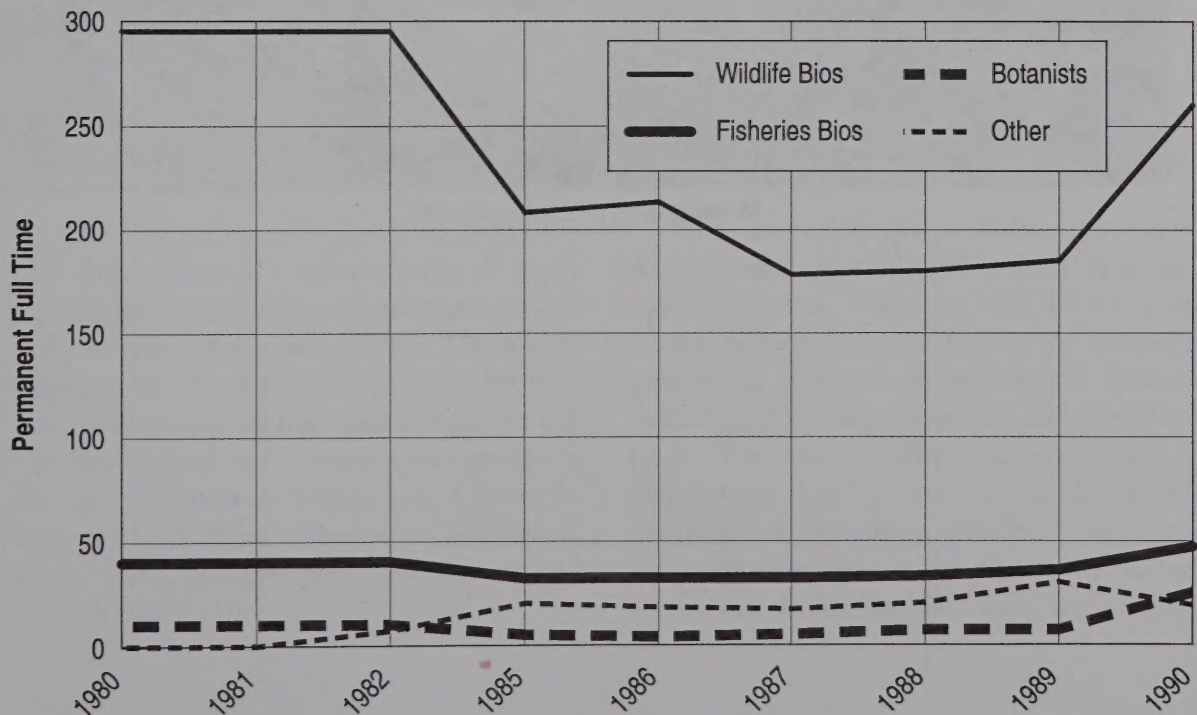
Fiscal Year 90 Expenditures by Program Elements for Threatened and Endangered Species Management.



Source: BLM Financial Management System
End of Year Report.

Note: Based on fiscal year 90 total expenditures for
T/E of \$5.0 million.

Staffing History.



Source: WFIS/Program Personnel Data Base (8/1/91).

Showcase Habitat Management Areas

One of the major challenges confronting the BLM and its implementation of *Fish and Wildlife 2000* is demonstrating to the American people the agency's ability to implement effective on-site actions as identified in the plan. As a means of demonstrating the BLM's commit-

ment, Showcase Management Areas have been established. These areas serve as tangible examples of the BLM's management on hundreds of other habitat areas that have not received the spotlight of a Showcase Area.



Mourning dove, an upland game bird

Showcase Areas



Each year wildlife students from the University of Idaho visit Craig Mountain and learn about wildlife habitat management from biologists in the Cottonwood Resource Area.

Alaska

Norton Sound Aquatic Habitat Management Plan

The Norton Sound Aquatic Habitat Showcase Area covers 4.5 million acres of prime aquatic and riparian habitat including over 1,000 miles of anadromous fish streams. The habitat management plan for the area is a joint Federal-State effort for managing aquatic resources and riparian-wetland environments in watersheds that are tributaries to Norton Sound in north-western Alaska. Priority species are the chinook, chum, coho, sockeye, and pink salmon and Dolly Varden.

Arizona

Lower Gila South Habitat Management Plan

The Lower Gila South Habitat Showcase Area includes over 1.7 million acres in southwestern Arizona. This vast tract hosts a wide variety of desert life, including the Sonoran pronghorn antelope, an endangered species, desert bighorn sheep, mule deer and desert tortoise. The Acuna Valley pineapple cactus, a plant species that is a candidate for listing, and the tumamoc globeberry, a Federally listed endangered plant species, are also found in the area. The BLM, together with the Arizona

Game and Fish Department, has carried out a 2-year study of habitat use patterns and vegetative characteristics of Sonoran pronghorn use areas. Key allotments in desert tortoise and desert bighorn sheep habitat have been monitored, and planning and collection of environmental data is under way. Interim categorization of tortoise habitat has been completed. Monitoring of the Acuna Valley pineapple cactus has been carried out with the assistance of The Nature Conservancy, the Forest Service and the Arizona Game and Fish Department.

California

Afton Canyon Natural Area

Afton Canyon Natural Showcase Area, a 41,000-acre riparian wetland area, was designated an Area of Critical Environmental Concern (ACEC) in 1980. The area's many ponds, marshes and streams provide habitat for a wide variety of wildlife. This area serves as a breeding and wintering ground for such species as the vermilion flycatcher, summer tanager, yellow warbler, and yellow-breasted chat. Golden eagles and prairie falcons nest here and other raptors have also been observed. Black bullhead, fathead minnow, and arroyo chub inhabit the river. The Mojave tui chub historically occurred in the area, which has been identified as a potential reintroduction site for other species. Management objectives emphasize improving riparian-wetland habitat, and providing low-impact recreational use compatible with wildlife.

Cedar Creek Watershed Improvement Project

The central feature of the 60,000-acre Cedar Creek Watershed Improvement Showcase Area is Cedar Creek, an 8.5 mile perennial creek lying entirely on private lands. The area is a potential

reintroduction site for the endangered Modoc sucker. Management objectives include reestablishment of a coldwater fishery on Cedar Creek, restoration of the hydrologic function of upland spring and meadow systems, and increasing the quality, quantity, and diversity of forage resources for wildlife and livestock. Cooperators include a 13-member Riparian Steering Committee appointed by the BLM, the Izaak Walton League Public Lands Restoration Task Force, The Nature Conservancy, local ranchers, and private landowners.

Cache Creek Habitat Management Plan

The 34,000-acre Cache Creek Habitat Showcase Area includes the Cache Creek Area of Critical Environmental Concern (ACEC), a half-mile-wide corridor of public lands found along segments of Cache Creek and North Fork River. More than 500 tule elk, the second largest herd in California, are found in the Cache Creek area, as well as more than 60 bald eagles. Golden eagles, wild turkeys and blacktail deer are also present. Management objectives include acquisition of additional wildlife habitat critical to the bald eagle and tule elk. Since 1985, the BLM has acquired 1,667 acres and the California Department of Game and Fish has acquired 1,500 acres. Planned management actions involve the installation of barriers on four-wheel-drive roads where feasible, revegetation of riparian-wetland areas, eradication of non-native vegetation, and removal of old barbed wire fence lines and other trash from the area.

The Carrizo Plain Natural Area

The 180,000-acre Carrizo Plain Natural Area lies on the southwest edge of the San Joaquin Valley. The area's size, isolation, relatively undisturbed nature and expanse make it

ideal habitat for the threatened and endangered species that make their home there: the San Joaquin kit fox, the blunt-nosed leopard lizard, the giant kangaroo rat, the San Joaquin antelope squirrel, the California jewelflower, the San Joaquin woolly-threads and Hoover's woolly-star. The Carrizo Plain also provides seasonal habitat for 6,000 sandhill cranes. Long-billed curlews and other shorebirds abound. Management activities will be directed toward endangered species and their habitats in concert with the BLM's multiple use mandate. Cooperators include The Nature Conservancy, the California Department of Fish and Game, several California universities, the Smithsonian Institute, the California Energy Commission and many volunteer groups.

Colorado

Arkansas Canyon Habitat Management Plan

The Arkansas Canyon Habitat Showcase Area covers 257,625 acres and 50 miles of stream. Implementation actions include maintaining fences and instream structures at the Texas Creek and Badger Creek Demonstration Area, monitoring these areas and the McCoy Gulch Riparian Demonstration Area, surveying and designing a watchable wildlife structure for viewing bighorn sheep along the Arkansas River, and coordinating peregrine falcon recovery actions.

In addition to these projects, a cooperative research proposal with the Colorado State University and the Colorado Cattlemen's Association will seek to develop data on which to base grazing adjustments between livestock and big game species on critical winter ranges. Cooperators include the Colorado Division of Wildlife, Trout Unlimited, the National Wild Turkey Federation, the National Audubon Society, the Rocky Mountain Bighorn Sheep Society, Canon

City High School and Canon City Middle School.

Idaho

Elk City Aquatic Zone Habitat Management Plan

Located in west-central Idaho approximately 35 miles east of Grangeville, the Elk City Aquatic Zone Showcase Area encompasses 27 miles of stream and 683 acres of associated riparian habitat in a scenic mountain basin environment. The plan seeks to repair chinook salmon, steel-head trout and riparian habitat. The riparian zone is also important to local populations of moose and white-tail deer. Management actions include elimination of fish migration barriers, installation of plantings along streambanks, stabilization of streambanks, installation of



Peninsular Bighorn Sheep

stream structures, reconstruction of channels, construction of connecting channels between dredge ponds for chinook rearing areas, and rehabilitation of dredge piles and installation of fencing and clean gravel.

Montana

Prairie Potholes Habitat Management Plan

The Prairie Potholes Habitat Area is centered around the Beaver Creek and Comertown areas in Phillips and Sheridan counties. The Beaver Creek project involves the creation of 3,800 acres of additional wetlands within the 300-square-mile project area to provide valuable waterfowl nesting habitat.

Full implementation of this plan will result in improved condition of native rangelands and establishment of perennial cover on marginal cropland to provide important habitat for many other wildlife species. A major problem that will have to be addressed is the water allocation that currently exists on the Milk River drainage and the concerns of water users over additional impoundments.

Principal cooperators with the BLM in the Beaver Creek project area are the Montana Department of Fish, Wildlife and Parks, the U.S. Fish and Wildlife Service, Ducks Unlimited, the Bureau of Reclamation, the Soil Conservation Service, the Montana Department of State Lands, the Montana Department of Natural Resources and Conservation, and the Milk River Irrigation District.

Nevada

Marys River Habitat Management Plan

The Marys River Habitat Showcase Area involves a partnership between the BLM, the

Nevada Department of Wildlife, and private landowners. These cooperative efforts are directed toward exchanging key parcels, obtaining conservation easements and exchange-of-use agreements, and purchase of private lands along the Marys River. The BLM already has completed an Environmental Assessment (EA) for the proposed exchange of 900 acres of BLM lands in the Las Vegas Valley for 60,000 acres of land with extremely high resource values for wildlife, range, recreation, and watershed protection. Included in the proposed 60,000 acres are 88 miles of stream, 71 of which are historic or current habitat of the Lahonton cutthroat trout, a Federally-listed threatened species.

New Mexico

San Antonio Pot Mountain Habitat Management Plan

The San Antonio Pot Mountain Habitat Showcase Area encompasses 351,000 acres of public, private, and State lands in Taos County, New Mexico. This popular art and tourist center offers skiing, fishing, big game hunting, river rafting, museums, and historic cultural sites such as the Taos Indian Pueblo. The area covered by the plan ranges in elevation from approximately 7,000 feet in the flat sagebrush mesa to 11,000 feet on San Antonio Mountain in the Cibola National Forest. It is home to one of the largest New Mexico wintering elk herds, as well as to pronghorn antelope and mule deer. The plan's goal is to improve and protect big game habitat. Consideration is also given to raptors and other nongame wildlife and riparian habitats. Accomplishments to date include construction of wildlife watering facilities and a wildlife viewing area, and carrying out a prescribed fire to improve elk winter forage. Various cooperators have participated in implementation efforts such as the New Mexico Department of Game and Fish, the New Mexico State Highway and Transportation Department, the

USFS, the Soil Conservation Service (SCS), Amigos Bravos (a private organization), the Rocky Mountain Elk Foundation, and the One-Shot Antelope Foundation.

Oregon/Washington

Lincoln County Habitat Management Plan

Contained within the 4,500 acre Lincoln County, Washington Showcase Area are 6.5 miles of stream and riparian, aquatic and wetlands habitats. One of the major goals is the acquisition of habitat through land exchange or purchase. Riparian enhancement projects undertaken thus far include fencing, planting and instream structures. Special grazing management has been initiated on four allotments, and waterfowl habitat enhancement has begun on three small lakes. The Inland Northwest Wildlife Council (an association of 11 wildlife organizations), the Washington Department of Wildlife, the Boy Scouts of America, the Department of Agriculture's Forest Sciences Laboratory and SCS, the Washington Native Plant Society, the Audubon Society and local ranchers have cooperated in implementing management actions.

Warner Wetlands

Contained within the 51,045 acre Warner Wetlands Habitat Showcase Area are thousands of acres of wetland habitat designated as the Warner Wetlands ACEC. The ACEC is home to a variety of waterfowl and shorebirds. Untainted marshes and sloughs, hundreds of miles of unobstructed lake and channel shorelines, and undrained swamps and meadows make up this outstanding complex of wetland and upland habitats. Located in the vicinity of Lakeview, Oregon, this area hosts hundreds of thousands of waterbirds on their annual migrations and thousands seeking nesting grounds in

summer. Sandhill cranes and long-billed curlews are among the many species of birds to be found there. Multiple uses in the ACEC include managed grazing, wildlife habitat, recreation and cultural resource values. The University of Nevada (Reno) maintains an archaeological school to research the pre-history of this unique area, and several other colleges and organizations have used the Warner Wetlands as a field classroom. Public involvement in the wetlands is extensive and many organizations, including the Izaak Walton League, DU, the Audubon Society, Friends of Wildlife and the National Wildlife Federation, have offered funding support, volunteer labor and other assistance to carry out wetland objectives.

Utah

Moquith Mountain/Parunuweap Canyon Coordinated Resource Management Area

The Moquith Mountain/Parunuweap Canyon Showcase Area encompasses 62,500 acres of public land, 9,797 acres of State land, and 10,415 acres of private land. Located west-northwest of Kanab, Utah, the area supports numerous resources and provides for an array of activities.

The area encompassed by this Showcase contains several designated management areas, including the Coral Pink Sand Dunes State Park, Ponderosa Grove Campground, Moquith Mountain Special Recreation Management Area, Moquith Mountain and Parunuweap Canyon Wilderness Study Areas, South Fork Indian Canyon Pictograph Site and the Water Canyon ACEC. It also includes winter hunting and roosting habitat for the endangered bald eagle and yearlong habitat for the listed plant, Welsh's milkweed and four candidate species: Coral Pink Dunes tiger beetle, Kanab ambersnail, gumbo milkvetch, and Zion daisy.

.....

A particularly species-rich management area, it is also believed to provide habitat to four other threatened, endangered and candidate species. The area contains critical mule deer winter range and yearlong range for desert bighorn sheep. A 13-member multiple land use steering committee assists in formulating management objectives and planned actions for this diverse area.

Horseshoe Springs Habitat

The Horseshoe Springs Habitat Showcase Area covers an important wetland complex of springs and marshes located 50 miles west of Salt Lake City. Waterfowl, shore birds and other typical aquatic/marsh mammals, reptiles, amphibians, and nongame birds live in the area. Long-billed curlews nest in the uplands and peregrine falcons use the area as feeding grounds. This rich riparian and wetland area has been nominated a Watchable Wildlife Area. Waterfowl is the primary target species of management. The area will be fully signed, and will include a signed hiking trail. A number of organizations have expressed interest in helping to implement the habitat management plan. The Tooele Wildlife Federation has agreed to assist in developing this area and the Utah Division of Wildlife Resources is a cosponsor of the plan and committed to assisting in its imple-

mentation. Other organizations expressing an interest in the plan include the Salt Lake County Wildlife Federation, the Boy Scouts of America, and the American Salt and MagCorp (Amex).

Wyoming

Currant/Sage Creek Habitat Management Plan

The Currant/Sage Creek Habitat Showcase Area covers over 79,000 acres and 31 miles of stream. The priority species for management are the Colorado River cutthroat trout, elk and deer. A grazing agreement will set utilization at 35 percent maximum and a rest rotation system will be implemented. Log overpour structures will be constructed in streams and woody vegetation planted. Plots and vegetation will be photographed for study purposes. Numerous individuals and organizations have cooperated on the habitat management plan. These include the Wyoming Game and Fish Department, the Lower Green River/Flaming Gorge Chapter of Trout Unlimited, Rock Springs radio stations KRKK and KSIT and Green River station KUGR, Sweetwater Television Corporation, the Rocket Miner and Rock Springs newspapers and local ranchers.

Future Challenges for Fish & Wildlife 2000

Although much has been accomplished under *Fish and Wildlife 2000*, there is still much to be done. The BLM will be working to strengthen the program in several areas, including staffing, training, support, planning and coordination.

Full implementation of *Fish and Wildlife 2000* will result in the following:

- Improved fishing, hunting, and wildlife viewing opportunities.
- Better access to public lands.
- Faster recovery of threatened and endangered species.
- Prevention of the need to list some candidate threatened and endangered species.
- Increased economic benefits to local communities.
- Sustained viability of important recreational species.
- Enhanced recovery of riparian, stream, and wetland habitats.
- Expanded partnerships and contributions from outside sources.

Staffing

Existing staffing of field biologists and botanists is only about 30 percent of that needed to effectively implement *Fish and Wildlife 2000*. At this level, implementation efforts are being

delayed in many instances because of the necessity to ensure input into resource/activity planning, National Environmental Policy Act (NEPA) analysis and review of other resource management activities such as mineral development, livestock grazing, timber harvesting and recreation accessibility. Additionally, at current staffing levels, the BLM is able to monitor only 50 percent of what is required in the Resource Management Plans and various activity plans.

In 1990, an internal BLM study was conducted that analyzed the impediments to implementation of *Recreation 2000* and *Fish and Wildlife 2000*. This report, completed in 1991, recommended several strategies. The report stated that a substantial increase of funding and full-time equivalents (FTE's) was absolutely essential to the successful implementation of *Fish and Wildlife 2000*. Funding and FTE increases since 1990 have allowed the program to make significant progress; however, a greater increase is required to augment BLM's current capability. Approximately \$75 million per year will be needed to fully execute the goals and objectives of the *Fish and Wildlife 2000* program.

The report also identified several other issues for which recommendations have been developed. These challenges are as follows: personnel/work force, support, accountability, planning and coordination. Most of the recommendations have either been implemented, completed or are currently in the process of being resolved.

Accountability

The BLM is striving to demonstrate and communicate that the additional funding and FTE's are enabling the agency to effectively

accomplish the goals and objectives of *Fish and Wildlife 2000*. The Annual Report of Accomplishments for *Fish and Wildlife 2000*, prepared initially in 1988, has been a key tool. Also, many briefings, speeches and discussion groups have helped convey information on accomplishments, as have exhibits and tours of onsite work.

In addition, an automated information system is being developed to track and analyze, accomplishments which will enable the BLM to prepare accomplishment reports in a more timely and efficient manner.



© Thomas Kitchin/Tom Slack & Associates

Blue Winged Teal

A Final Look

Fish and Wildlife 2000 has ushered in a new era at the BLM. It has also helped bring about a new attitude about these valuable resources and the way we manage them. It is a tangible change. The dozens of plans and onsite projects spawned by *Fish and Wildlife 2000* mentioned in this report represent only a sliver of all that has

been accomplished since the plan was published in 1987.

The BLM anticipates accomplishing even more in the future. It will take our best effort and the support of Congress and our hundreds of partners to make it happen, but we believe it will happen.

Our fish and wildlife resources on the public lands deserve no less.



Great Horned Owl



Riparian-Wetland Initiative for the 1990's

Introduction

The Riparian-Wetland Initiative for the 1990's was developed as a blueprint to manage and restore riparian-wetland areas covering 23.7 million acres managed by the Bureau of Land Management (BLM). The Initiative recognizes that riparian-wetland areas are biologically, economically, and environmentally valuable, and takes an interdisciplinary approach to their management.

The Riparian-Wetland Initiative sets a series of goals and strategies to meet healthy conditions on the riparian-wetlands managed by the BLM, with an overall goal of restoring 75 percent to proper functioning condition by 1997.

This overall national strategy cuts across several BLM programs and complements other BLM plans such as *Waterfowl Habitat Management on Public Lands, A Strategy for the Future*; *Fish and Wildlife 2000*; and *Recreation 2000*. The BLM is also working with other Federal and State agencies, private sector cooperators, and the general public to see that these goals are carried out.

This report highlights major accomplishments in the program during FY 1991. It reveals concrete examples of the BLM's commitment to wise management of the riparian-wetland resources and its continuing efforts to meet the President's and Interior Secretary's stewardship and wetlands conservation challenges, while carrying out numerous laws, executive orders, regulations, and policies.

Riparian Areas— Ribbons of Green

Riparian areas are lands adjacent to creeks, streams, lakes and rivers. They are sometimes referred to as green ribbons because vegetation confined to the banks of waterways form a ribbon-like pattern when seen from the air. Because these areas contain scarce water and vegetation in the otherwise arid Western United States, they are particularly valuable to Western fish and wildlife species, and are attractive to livestock as well. In addition, the conditions of these areas can have major impacts on water quality and quantity because they act as filters for the water flowing through them and can affect the entire watershed if degraded.

BLM Policy Definition

The BLM's 1987 policy on riparian area management defines a riparian area as "an area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lake shores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil."

What is a Wetland?

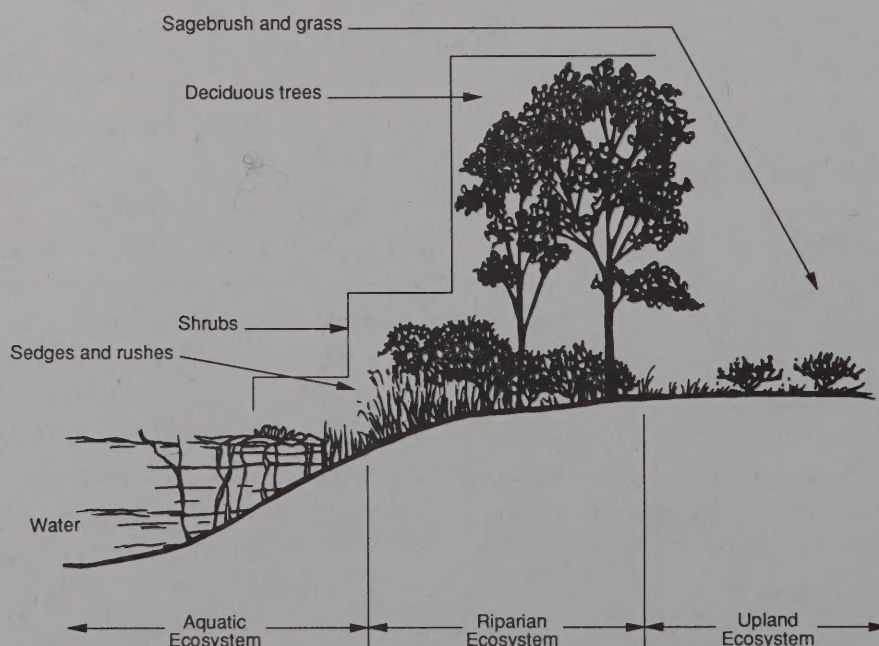
Wetlands are generally defined as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and which, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include marshes, shallows, swamps, lake bogs, muskegs, wet meadows, estuaries, and riparian areas.

Although there are technical distinctions between riparian areas and wetlands, they are linked for progress reporting in this document. The waterfowl habitat management part of the riparian-wetland progress report is identified independently in *Fish and Wildlife 2000—A Plan for the Future*, under goal #3.

Riparian Areas: Small Acreage, Big Values

Riparian-wetland areas on public lands comprise 23.7 million acres, including 182,000 miles

Aquatic-riparian-upland ecosystem.



of riparian streams, or 8.8 percent, of the 270 million acres of public lands managed by the BLM. Of this total, 17 million acres are considered wetlands, while 7 million are riparian. In the contiguous United States, these lush green areas of vegetation represent 1.3 million acres including 49,320 miles, or 0.7 percent of the lands administered by the BLM. The values and benefits of these ecologically rich areas far exceed the small acreage they occupy.

1991 Accomplishments in a Nutshell

The BLM continues to make progress toward meeting the goals established in the Riparian-Wetland Initiative. The following specific accomplishments made in 1991 are laying the groundwork for a healthier riparian-wetland ecosystem in the West.

- 35 new watershed activity plans were completed, and an additional 58 activity plans that addressed riparian issues were prepared or revised.

Values of Riparian-Wetland Areas

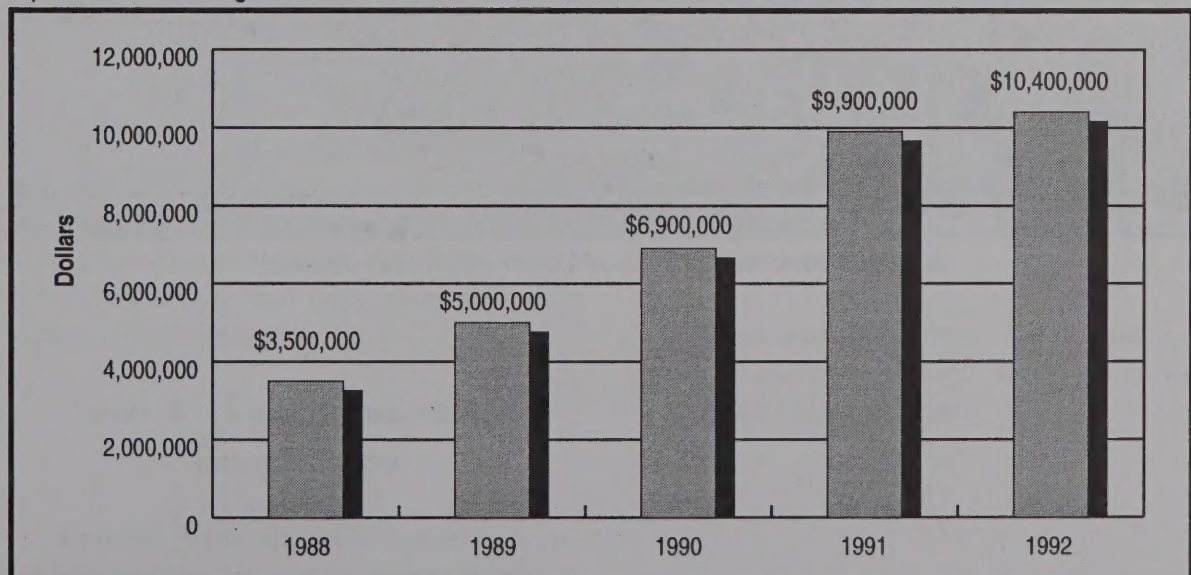
- Purify water, removing sediments as water moves through.
- Reduce the risk of flood damage.
- Reduce streambank erosion.
- Increase irrigation water by holding water in stream banks.
- Maintain instream and streambank ecology, increasing biodiversity.
- Increase ground water supplies.
- Support a diversity of wildlife and plant species.
- Maintain habitat for healthy fish populations.
- Provide water, forage, and shade for livestock.
- Provide areas to fish, camp, picnic, relax.

- 6.5 million acres have been inventoried, including 1 million acres of wetland management areas and 1.5 million acres of riparian area in 1991.
- 682 improvement projects were developed, including 275 watershed improvements.
- 532 existing projects were maintained.
- 544 existing management plans were monitored.
- 21,000 acres of riparian-wetland acres were acquired, primarily through land exchanges.
- 9 private groups or individuals received the special Riparian Stewardship Award for their assistance in the BLM's program.
- 40 riparian areas are being managed through special partnerships, primarily with State and private cooperators.

On-site accomplishments in 1991 include the following examples:

- Repaired water control structures at the 9,000 acre Pariette Draw Wetland in Utah.

Riparian Area Funding.



Note: Does not include funding for wetlands or land acquisitions.

- Constructed the Custer Reservoir Dam in Montana containing over 1.5 miles of shoreline that have been fenced and planted.
- Planted 10,000 willows for bank stabilization and wildlife cover along Cedar Creek in California.
- Working on restoring the entire watershed environment in the Badger Creek, Colorado, area. Over 17 groups are cooperators with the BLM on this project.
- Put 160 miles of Trout Creek under intensive management in south-central Oregon in order to improve these riparian areas to proper functioning condition.
- Acquired through exchange over 54 stream miles of the Mary's River in Nevada. This prime riparian habitat is critical to the restoration of the endangered Lahontan cut-throat trout.



San Pedro River Riparian National Conservation Area in Arizona

Goals and Strategies for 1991 and Beyond

The Riparian-Wetland Initiative for the 1990's establishes four general goals scheduled for implementation through 1995.

Goal 1—Restoration and Maintenance

Restore and maintain riparian-wetland areas so that 75 percent or more are in proper functioning condition by 1997. The overall objective is to achieve an advanced ecological status, except where resource management objectives, including proper functioning condition, would require an earlier successional stage.

Goal 2—Protection and Expansion

Protect riparian-wetland areas and associated uplands through proper land management and avoid or mitigate negative impacts. The objective is to protect, acquire and expand key areas to provide for their maximum public benefit, enhancement, and efficient management.

Goal 3—Information and Education

Conduct an aggressive riparian-wetland information and outreach program, including providing training and research. The objective is to promote the value and importance of healthy riparian-wetland areas.

Goal 4—Coordination and Cooperation

Improve partnerships and cooperative restoration and management processes in imple-

menting the Riparian-Wetland Initiative. The objective is to accomplish funding alternatives for high-priority projects.

Implementation Strategies

In order to achieve these goals, several strategies have been adopted.

Inventory/Classification: Collect, compile, and evaluate baseline information to determine current ecological status, potential, and condition.

Land Use and Activity Plan Preparation/Revision: Develop and/or revise management plans that involve riparian-wetland areas.

Project Development and Maintenance: Complete and maintain projects such as fences, water developments, tree planting, prescribed fire, and habitat improvement structures to create, improve, and/or maintain riparian-wetland conditions.

Monitoring: Monitor riparian-wetland areas to determine if management actions are meeting specific objectives.

Protection and Mitigation: Avoid or mitigate impacts of surface disturbance activities on riparian-wetland areas.

Acquisition and Expansion: Acquire and expand riparian-wetland areas primarily through land exchanges.

Implementation Priorities

Priorities for *The Riparian-Wetland Initiative for the 1990's* are based on "degree of threat"—the extent to which the riparian-wetland areas may deteriorate if restoration or improvement action is not immediately implemented.

Other factors, such as special status species, water quality, competing water uses, fisheries, and recreation values are considered when establishing priorities. Such factors as potential for improvement, risk of further degradation, and threatened or endangered species habitat are also considered.

Top Priority: Riparian-wetland areas that may suffer further degradation and have potential for improvement are given top priority.

Lower Priority: Those that have been degraded but appear stable are given lower priority for restoration and improvement

State and District Plans Reflect National Priorities

National-level implementation priorities are reflected in individual State and District strategic plans. Goals and strategies discussed herein are not in priority order. Priorities are being accomplished as State and District strategic plans are implemented.

Key Riparian-Wetland Management Considerations

Actions are tailored to area: Management objectives are tailored to the conditions, conflicts, improvement potential, and land use considerations of riparian areas on a site-specific basis.

Integrated watershed approach: A holistic approach is used whenever possible, rather than just focusing on the narrow riparian zone or small wetland area.

Natural over structural processes preferred: Relying on the natural functions of streams and wetlands to operate without significant alteration is preferred. This is determined by evaluating the interrelationships between these systems and evaluating the natural recovery processes operating in an area prior to structural measure considerations.

Budget for Restoration and Maintenance

Riparian-wetland activities are not funded as a separate program. Several BLM programs contribute to this effort. Since FY 1988, the BLM has received an increased budget for these activities, from \$3.5 million to \$10.4 million in FY 1992.

Actual Progress, Accomplishments in 1991



(Left) Clover Creek, Shoshone District in Idaho, showing degraded riparian area after season-long grazing by cattle (1975).



(Below) Clover Creek after implementation of live-stock grazing prescription for a 15-year period (1990).

Goal 1—Restoration and Maintenance

Restore and maintain riparian-wetland areas so that 75 percent or more are in proper functioning condition by 1997.

As the BLM works towards restoring and maintaining riparian areas to achieve proper functioning condition, a bureau-wide standard for monitoring and reporting improvements in condition is being developed which will enable the agency to better quantify progress. In 1989, each State prepared individual strategies which

identified projected riparian needs for restoration and maintenance for Fiscal Years 1991 to 1995. The BLM is concentrating on inventory, planning, project development and maintenance, and monitoring. These 5-year needs will be updated as more information becomes available.

Implementation of Strategies for Restoration and Maintenance

Strategies are implemented in various stages. For example, in those areas where plans are completed, project development is under way. In other areas, inventories are being conducted to gather baseline data, which facilitates plan-

ning and project design. Where plans have been implemented, monitoring is being conducted to determine the extent to which riparian-wetland management objectives are being met.

Resource Management Plans

Resource management plans were completed on four resource areas in Utah and Wyoming that addressed riparian-wetland related resource conflicts, complementary relationships, and opportunities for improvement. As a result, the best mix of multiple uses are developed consistent with, for example, the State's Nonpoint Source (NPS) Management Plans or Endangered Species Recovery Plans.

Inventories

Extensive inventories and evaluations were conducted on wetland management areas covering 1 million acres, primarily in Alaska, North Dakota, and Wyoming. These inventories are primarily conducted with topographic maps, aerial photographs, and satellite imagery.

In Alaska, Colorado and Idaho, inventory, prioritization and initiation of needed treatments were made on abandoned and active mineral development areas with riparian-wetland values.

Intensive inventories were conducted on 1.5 million acres and 2,970 miles of riparian areas to assess ecological condition, establish site specific objectives, prepare resource plans, and identify restoration measures.

Cooperative Agreements

Cooperative management agreements/activity plans were implemented for 4 wetland management areas in Alaska, California, Montana, North Dakota, and Wyoming.

Activity Plans

Preparation or revision of 93 activity plans that addressed riparian issues (e.g., Allotment

Management Plans, Watershed Management Plans, Habitat Management Plans) were completed nationwide. Activity plans included land use plan objectives and provided appropriate management prescriptions (e.g., livestock grazing) related to riparian area management.

Restoration, Improvement, Maintenance

Restoration and/or improvement of riparian-wetland areas consisted of 682 on-site projects. These measures included water developments, fence construction, tree, shrub and grass planting, and prescribed burning to facilitate management.

Instream structures are required in some areas when other restoration measures are inadequate to achieve the desired level of improvement. Attempts are made to rely on the natural riparian-wetland function. However, in these areas of special emphasis, major structural improvements were necessary for riparian-wetland systems to maintain themselves, while remaining stable for the long-term.

Structural Improvements

State	Project Area
Arizona	Cienega Creek
California	Cedar Creek
Colorado	Milk/Alkali Creek
Idaho	Snake River Tributaries
Oregon	East and Beaver Creeks
Wyoming	Muddy Creek

Maintenance of 532 riparian-wetland projects was conducted to ensure projects continue their usefulness. Project maintenance was performed by the BLM, cooperators, volunteers, land users, and interest groups.

Monitoring

Monitoring of management actions was an ongoing effort on 544 activity plans or sites to

evaluate the effectiveness in achieving riparian goals and objectives. Where riparian objectives were not being met, revisions have been made in management prescriptions and are being monitored to measure responsiveness to restoring riparian values.

Water quality is also monitored as part of the Riparian-Wetland Initiative. In addition, the initiative coordinated with implementation of Best Management Practices (BMPs) to meet State and national water quality objectives.

Goal 2—Protection and Expansion

Protect riparian-wetland areas and associated uplands through proper land management and avoid or mitigate negative impacts. Acquire and expand key areas to provide for their maximum public benefit, protection, enhancement, and efficient management.

Protecting riparian-wetland areas from surface disturbing activities through avoidance, minimization of adverse impacts, compensatory actions, or other mitigation measures is an important part of the overall riparian-wetland initiative. In addition, key riparian-wetland areas are being brought into public ownership, primarily through land exchange or donation.

Mitigation

Protection of riparian-wetland areas is accomplished through sound management practices which avoid negative impacts to the maximum extent practicable. Unavoidable impacts

Major Water Quality Monitoring Efforts		
State	District	Specific Area
Alaska	Kobuk	Kuzitrin
California	Desert (Riverside)	San Sebastian/ San Felipe Creek
	Susanville	Alturas Resource Area
Colorado	Canon City	Badger, Texas / Pass Creeks / McCoy Gulch
	Montrose	Gunnison River Tributaries
Oregon	Spokane	Districtwide
Wyoming	Lander	Beaver Creek
Idaho	Statewide	Stream segments of concern to Idaho

are mitigated to the extent possible. Compensatory mitigation, such as creating wetlands, is being applied where feasible. For example, reconstruction of the Nome Creek channel within Beaver Creek Wild and Scenic River area in Alaska was completed as a compensatory mitigation measure.

Protective stipulations are incorporated in land use authorizations and contracts to ensure that site-specific riparian-wetland management objectives are met. The BLM coordinates permits under Section 404 of the Clean Water Act with the Corps of Engineers (CORPs), Environmental Protection Agency (EPA), Fish and Wildlife Service (FWS), and others to assure compliance with the law.

In 1991, the BLM assured compliance with mitigation measures for hundreds of surface disturbing activities such as road and pipeline construction, mineral exploration or develop-

ment, recreation activities, and timber, grazing, and fire management practices. Monitoring of these activities to determine their success in mitigating impacts required several adjustments in mineral activities.

For example, in Alaska, monitoring of placer mining operations was made with aircraft use and aerial photography interpretations of mining impacts and reclamation successes. In Idaho Falls, Champagne Creek is being monitored to evaluate the success of beaver dams and exclusion of uses to curtail acid-mine drainages from an abandoned mine portal.

Special Designations Offer Protection

Special designations through existing legislation and land use planning processes, such as Unique Waters, National Riparian Conservation Areas, Areas of Critical Environmental Concern [ACEC], or Wild and Scenic Rivers, can greatly benefit critical or unique riparian-wetland areas.

The following table shows riparian areas that have recently acquired these benefits through special designations.

Special Designations			
State	District	Special Designation	Project Area
Arizona	Safford	National Riparian Conservation	San Pedro River
		National Riparian Conservation	Gila - Box
	Phoenix	ACEC Wilderness	Tule Creek Aravaipa Canyon
California	Bakersfield	ACEC	Fish Slough
	Ukiah	ACEC	Cache Creek
Oregon	Eugene	ACEC	Long Tom
Utah	Moab	ACEC	Cajon Pond

Water Rights Assessments	
State	River/Stream/Source Area
Alaska	Gulkana, Delta, and Forty-mile Rivers
	Beaver and Birch Creeks
Arizona	San Pedro and Bill Williams River
	Aravaipa, Peoples Canyon, and Burro Creek
California	Lower Smoke Creek and
	Round Canal Reservoir
Colorado	Dolores River
	Missouri and Cathedral Creeks
Montana	Powder River
New Mexico	Rio Chama River
Oregon	Klamath Falls Resource Area

Water Rights Assessments

The BLM obtained on a case-by-case basis the rights or cooperative agreements for water necessary to sustain riparian-wetland areas and their associated uses through various State laws. Site-specific studies were conducted in the following areas to determine water amounts, including instream flows, needed to support healthy riparian-wetland values.

Additionally, in support of the Riparian-Wetland Initiative, the States of Arizona, Utah, and Nevada are cooperating with the BLM on instream flow assessments on the Virgin River. This will quantify water needs for riparian vegetation, endangered and threatened species, recreation, and other uses.

Acquisition

The BLM is actively acquiring riparian-wetland areas through exchange, donation, or purchase, especially in areas adjacent to Waterfowl Habitat Management Areas or in areas that are critical for threatened or endangered species. Recently acquired key riparian-wetland areas are addressed in the following table.

Opportunities to acquire key riparian-wetland areas from voluntary sellers were exercised through mutually beneficial transactions.

Wetland acquisition packages on a State-by-State basis were developed consistent with the wetland acquisition criteria included in the National Wetland Priority Conservation Plan. California, Arizona, and Utah developed proposals in accordance with the Land and Water Conservation Funding in Fiscal Year 1991.

Recently Acquired Key Riparian Areas		
Project Name	District Office(DO)/State	Acres
Fee Purchase		
King Range	Arcata RA, California	41
Carrizo Plains	Caliente RA, California	16,772
Kelley Property	Montrose DO, Colorado	16
Clearwater River	Coeur d'Alene DO, Idaho	27
Egin Lakes	Idaho Falls DO, Idaho	20
Owyhee Wild River	Vale DO, Oregon	107
S Fork, Walla Walla River	Baker RA, Oregon	65
New River	Coos Bay DO, Oregon	345
Subtotal		17,393
Land Exchange		
North Eagle Lake	Eagle Lake RA, California	138
Afton Canyon	Barstow RA, California	14,348
Consumnes River	Folsom RA, California	154
Randleman	Craig DO, Colorado	640
Sheppard and Assoc.	Canon City DO, Colorado	1,013
East Fort Salmon River	Salmon DO, Idaho	40
Bull Mountain	Butte DO, Montana	3,971
Mary's River	Elko DO, Nevada	46,969
Blue Grade Partnership	Spokane, Washington	380
Subtotal		67,653
Total 21 Parcels		85,046
Acres that are riparian or wetland in character		21,262

Holistic Watershed Management

Riparian-wetland management was focused on the entire watershed using a holistic approach and involving all landowners wherever possible. The areas were also managed for multiple uses. In certain situations, such as critical water quality or threatened and endangered species, it is necessary to restrict some uses to achieve site-specific objectives.

Badger Creek, Colorado: Holistic Approach Taken

Of national significance, Trout Unlimited joined with the BLM and 16 other Federal, State, and local agencies on a project focusing on the entire watershed environment. The project is designed to protect and improve fisheries, wildlife habitat, range resources, recreation, and water quality of the Badger Creek, Colorado watershed. Treatments will also reduce sediment discharge into the Arkansas River in Fremont County.

Goal 3—Information and Education

Ensure an aggressive riparian-wetland information/outreach program, including training and research.

There is growing awareness of the value and importance of healthy riparian-wetland areas as more and more information and training on riparian-wetland area management is being made available across the country. As a result, new research is being conducted to provide the scientific basis for management actions. These efforts focus on the compat-

ibility of economic uses of riparian-wetland areas in keeping with the BLM's multiple-use mandate.

The BLM worked in 1991 to provide a greater understanding and appreciation for riparian-wetland values and functions to a growing audience including professional land managers, business and community leaders, and the general public. An expanded program of media coverage, brochures, audio-visual exhibits, videos, and teaching material was developed and included in presentations at workshops, conferences, and schools as described in the table on this page.

In addition, at the national level, the BLM cooperated with the Environmental Protection Agency (EPA) and Soil Conservation Service (SCS) to make available the publication titled *Livestock Grazing on Western Riparian Areas*, 1990.

Riparian Showcases

Showcase areas have been established in each State to demonstrate that well-managed riparian areas can produce a variety of multiple-

Major Outreach Efforts		
State	Office	Information/Outreach Effort
Colorado	Craig	Brochure and slide show - Northwest Colorado Riparian Efforts - Their Benefits and Uses
	State	Conference - Colorado Riparian Association
		Publication - Cows, Creeks and Cooperation - Three Colorado Success Stories
Montana	Butte	Booklet - Montana Forestry, Best Management Practices
Arizona	Phoenix	Outdoor Classroom - Chalky Springs Area
	Yuma	Pamphlet - Betty's Kitchen Wildlife Area
Utah	Vernal	Workshop - Stream Functions and Classification
		Video - Book Cliffs Conservation Initiative
Wyoming	Rock Springs	Presentation - Safari Club International
	State	Publication - Wyoming Riparian Management Activity Guide, 1991. (with Summary)

Showcase Areas in 1991		
State	District	Showcase Area
Arizona	Yuma	Betty's Kitchen
Colorado	Craig	Cathedral Bluffs
	Canon City	Badger, Texas, and Pass Creeks and McCoy Gulch
Montana	Miles City	McCone County
Washington	Spokane	Yakima River
Utah	Vernal	Pariette Wetlands
		Book Cliffs Conservation Area
Wyoming	Rawlins	Muddy Creek
	Rock Springs	White Acorn Allotment
		Sugarloaf Allotment

use benefits while maintaining a healthy riparian system.

Riparian Stewardship Awards

The BLM initiated the Riparian Stewardship Award program to recognize individuals and groups making significant contributions to riparian stewardship on public lands. Recent winners include the following.

1990 Recipients

Lee and Jerry Brimhall, Arizona, for restoration of sensitive and critical wildlife and fishery habitat.

Cedar Creek Landowners, California, for their cooperative efforts as adjacent landowners.

Bill and Kathy Barnard, Colorado, for serving as showcase allotment and riparian awareness tour hosts.

Shoshone Cattlemen's Association, Idaho, for demonstrating the use of livestock grazing as a restoration tool.

Montana Riparian Education Commission, Montana, for riparian education efforts.

Barrick Goldstrike Mine, Inc., Nevada, for funding high priority riparian projects, and providing volunteers and equipment.

PLRTE, Izaak Walton League of America, Oregon, for facilitating volunteer efforts for restoration projects.

Doc and Connie Hatfield, Oregon, for innovative livestock-riparian compatible uses.

Thomas E. Bingham, Utah, for organizing the Utah Riparian Coalition.

1991 Recipients

Elgin School, Duffy, Erickson, and Brichta Elementary Schools, Arizona, for tree planting and erosion control efforts.

Mattole Watershed Council, California, for streambank stabilization and tree and shrub plantings.

Collegiate Peaks Chapter of Trout Unlimited, Colorado, for streambank stabilization, plantings, and sign construction.

Lava Lake Cooperative Management Group, Idaho, for beaver introduction and livestock management.

Daniel Q. Haughian, Montana, for integrated resource management planning and interagency cooperation.

Cordex Exploration Co., Nevada, for providing fencing materials and volunteers use of equipment.

Conoco, Inc., New Mexico, for creating wetlands.

Uinta Basin Coalition, Utah, for coordinating study plans and public interest activities.

Jack Turnell, Wyoming, for hosting tours, restoring habitat, and innovative livestock management techniques.

Riparian Area Management Training

Training was expanded to address short and long-term problem solving needs so that the technical and management skills required were available for planning and program implemen-

Coordinated Riparian Management Training		
Fiscal Year	Location	Field Exercise Location
1989	St. George, Utah Casper, Wyoming	Santa Clara River Bates Creek/Shirley Basin
1990	Ruidosa, New Mexico Billings, Montana Tucson, Arizona	Fort Stanton Sage Creek Cienega Creek
1991	Canon City, Colorado Elko, Nevada Fairbanks, Alaska	Badger Creek Dixie Creek Crooked Creek

tation. This training was also made available to the public and other agencies.

A state-of-the art training course titled *Coordinated Riparian Area Management* has been held since 1989. Active participation by trainees, including other Federal and State agency personnel, ranchers, environmental and user groups, is encouraged.

In addition, a pilot course, *Riparian-Wetlands Ecological Site Classification*, was held in Arizona in May, 1991.

Research

Research opportunities were explored in cooperation with university, Federal or State researchers to identify riparian-wetland management strategies and techniques. Global climate change and habitat improvement projects

Riparian Research			
State	District	Strategy/Technique	Cooperation
Arizona	Safford	San Pedro River Global Climate Study	University of Arizona
Colorado	Craig	Douglas Creek Willow Planting	US Fish and Wildlife Service
New Mexico	Roswell	Water Snake Habitat Improv.	Department of Fish & Game
Idaho	Statewide	Wetland plant improved varieties	Soil Conservation Service

gave full consideration to riparian-wetland area research needs as identified in the above table on this page.

Goal 4—Coordination and Cooperation

Improve partnerships and cooperative restoration and management in implementing the riparian-wetland initiative.

Because riparian-wetland ecosystems do not begin or end at landownership boundaries, a cooperative management effort is absolutely essential. To be successful, every riparian-wetland management effort requires cooperation and coordination with all affected parties.

Joint funding ventures, such as Challenge Cost Share Funding Programs, permittee con-

tributions, and other private assistance are excellent approaches to financing high-priority management projects. Such opportunities extend existing funding and confirm effective partnerships.

Organizations are working with the BLM's Volunteer Program to encourage and facilitate valuable volunteer assistance. Such volunteer assistance not only helps to complete projects and perform required maintenance, but it also heightens public appreciation of the value of the riparian-wetland resources.

A coordinated, cooperative effort was promoted with private landowners, resource users, organizations, government agencies and the interested public. As a result, many land users and groups volunteered time and labor to help the BLM complete the following riparian-wetland projects.

Riparian Partnerships			
State	District	Project/Activity Area	Cooperator/Partnership
Arizona	Phoenix	Lower Gila	Arizona State University & Arizona Game and Fish
		Burro Creek	Rancher
		Cienega Creek Earth Day	5th to 8th grade school children
California	Bakersfield	Carrizo Plain Natural Area	The Nature Conservancy, California Dept. of Fish and Game, and local sportsmen.
	Susanville	Cedar Creek/ Tule Mountain	Modoc. County School, California State University (Chico), and youth conservation crew
	Ukiah	Mattole River Estuary	Humboldt State University, Dept. of Fish and Game and Local Watershed Groups
		Trinity River	US Fish and Wildlife Service, Trinity River Trout Foundation, and Dept. of Water Resources

Riparian Partnerships table continued on next page

Outreach activities have been expanded to encourage more private individuals, groups, and government agencies to work jointly on riparian-wetland enhancement projects.

The following cooperation and partnership efforts have been organized:

Oregon Watershed Improvement Coalition
Montana Riparian Association

Public Lands Restoration Task Force
(PLRTF) of the Izaak Walton
League of America, Inc. (Oregon)
Trout Unlimited
The Nature Conservancy
Northwest Colorado Riparian Task Force
Colorado Riparian Association
Uinta Basin Riparian Coalition (Utah)
Mattole Watershed Alliance (California)

Riparian Partnerships			
State	District	Project/Activity Area	Cooperator/Partnership
Colorado	Grand Junction	Kannah Creek	Delta Correction Center inmates
		Milk/Alkali Creek	Colorado State Highway Department
	Craig	Soldier/Cathedral Creek	Rifle, Colo. Boy Scouts
	Canon City	Rio Grande River	Colo. Div. of Wildlife
		La Garita Creek	Trout Unlimited; Colorado Division of Wildlife and Department of Corrections
		Dolores River	University of Colorado; Pennsylvania State University
		Uncompahgre Inventory	Student Conservation Association
Eastern States		Lake Vermilion Island	Minnesota Department of Natural Resources
Idaho	Idaho Falls	Snake River	U.S. Forest Service and citizens task force
	Shoshone	Thorn Creek Pilot	Shoshone Cattlemen's Association
	Boise	Zimmer Tract	Division of Fish and Game, Bureau of Reclamation
Montana	Miles City	Custer Creek	Ducks Unlimited
New Mexico	Las Cruces	Rio Salado/Placitas	Quail Unlimited

Utah Riparian Coalition
 New Mexico Riparian Council
 Arizona Riparian Council

The BLM Service Center in Denver, Colorado, provided leadership in the development and implementation of standardized riparian-wetland inventory, classification, evaluation,

management, monitoring, and data handling technical references. BLM management references made available are:

A Selected, Annotated Bibliography of Riparian Area Management, 1987;

Use of Aerial Photography to Inventory and Monitor Riparian Areas, 1987;

Riparian Partnerships			
State	District	Project/Activity Area	Cooperator/Partnership
Nevada	Elko	Dixie Creek	Soroptimist International, Trout Unlimited, Community College, Naturalists, Scouts, and Newmont Gold Company
	Winnemucca	Sonoma Creek	Nevada Cattlemen's Assoc., Public Lands Restoration Task Force (PLRTF of Izaak Walton League, Nevada Mining Association and Companies, University of Nevada, and Nevada Dept. of Wildlife & local scout troops
	Carson City	Downhill Meadow	Student Conservation Association
Oregon	Lakeview	Warner Wetlands	North American Wetlands Conservation Council, Ducks Unlimited, The Nature Conservancy, and PLRTF of Izaak Walton League
	Medford	Jenny Creek	PLRTF of Izaak Walton League, Croman Corp. (logging firm), The Nature Conservancy, and Oregon Dept. of Fish and Wildlife
	Prineville	Bridge Creek	(Same as for Jenny Creek area)
	Salem	East and Beaver Creeks	Oregon Department of Fish and Wildlife
	Burns	Little Blitzen	Catlin Gable High School Natural Resources Class
Washington	Spokane	Lincoln County Habitat Management Plan	Inland Wildlife Council, Washington Department of Wildlife, and Audubon Society

Riparian Partnerships table continued on next page

Riparian Partnerships			
State	District	Project/Activity Area	Cooperator/Partnership
Utah	Moab	Indian Creek	Utah Division of Wildlife Resources
	Vernal	Sweetwater	Scout troops
	Salt Lake City	Otter Creek	Scout troops and US Forest Service
		Forks Meadow	Utah State University
	Richfield	Granite Pools	State of Utah
		Mud Lake Spring	Utah State Energy Office; Scout Troops
	Cedar City	Cottonwood Seep	Rocky Mountain Elk Foundation
		North Sulphur Spring	National Mustang Association
Wyoming	Rawlins	Sun Ranch Stewardship	Permittee, Trout Unlimited, Local Sportsmen & Wyoming Game and Fish Department
		Muddy Creek	Scout troops, University of Wyoming, Permittees
		National Wetland Inventory	Wyoming Game and Fish Department
		Jackson Spring	Wyoming Game and Fish Department

Inventory and Monitoring of Riparian Areas, 1989;

Grazing Management in Riparian Areas, 1989; and

Riparian-Wetland Classification Review, 1991.

Wetland Initiative for the 1990's was integrated with other BLM initiatives such as *Fish and Wildlife 2000*, *Recreation 2000*, *Watchable Wildlife*, *Recreational Fisheries Policy*, and *The Range of Our Vision*. The tables in this section address these and other cooperative efforts.

An Integrated Effort Within the BLM

Because riparian-wetlands objectives overlap with other BLM programs, the *Riparian-*

Tracking System Developed

A system was developed and implemented to track progress in meeting objectives and to report accomplishments and expenditures made on behalf of the Initiative. FY 1991 was the

Integrated Efforts			
State	District	Area	Initiative
California	Desert	Sheep Hole Oasis	Recreation 2000
	Ukiah	Paynes Creeks	Recreation 2000
Colorado	Canon City	Arkansas River	Recreation 2000
Idaho	Burley	Shoshone Creek	Idaho "Stream Segment of Concern"
	Pocatello	Goodenough Creek	Recreation 2000
Montana	Lewistown	Wood Wildlife Viewing	Watchable Wildlife
New Mexico	Albuquerque	Orillo Verde	Recreation 2000
Utah	Vernal	Pariette Draw	Take Pride in America
Washington	Spokane	Douglas Creek	Take Pride in America, Adopt-a-Stream
Wyoming	Casper	Table Mountain	Recreation 2000
	Rawlins	Carmody Lake	Recreation 2000

initial year for implementation of the tracking system as a tool for reporting progress in meeting the riparian-wetland goals.

Interdisciplinary, Interagency Approach

Interdisciplinary teams are being encouraged to formulate riparian-wetland objectives, multiple-use management strategies, and proposed actions. Range conservationists, soil scientists, hydrologists, wildlife biologists, fishery biologists, recreation planners, and others are involved in riparian-wetland activities. Management officials at all levels are involved in making the necessary decisions.

Coordination with the U.S. Fish and Wildlife Service (FWS) was an ongoing effort on

Regional Fish and Wildlife Concept Plans, Wetlands Inventory Projects, Stewardship 2000, and other activities outlined in the FWS Wetlands Action Plan. The U.S. Geological Survey, Bureau of Mines, and others were contacted on water quality, hydrologic and geologic studies, and reclamation related to riparian-wetland areas. The BLM coordinated with the Bureau of Reclamation, Forest Service, Soil Conservation Service, and other appropriate agencies on the land management aspects of riparian-wetland enhancement.

Cooperative Agreements on Riparian Management		
State	Cooperator	Project
Arizona	Soil Conservation Service	Plant material development
	Arizona-Sonora Desert Museum	Interpretive beaver/otter display for international clientele viewing
	University of Arizona	San Pedro River Global Climate Change
Colorado	The Nature Conservancy	Statewide riparian classification effort
	Colorado Division of Wildlife	De Weese State Wildlife Area
	Trout Unlimited	Cunningham Creek Inventory
	State of Colorado; US Dept. of Agriculture; Bureau of Reclamation; Soil Conservation Districts; Local and Areawide Governments; and Colorado Trout Unlimited	Badger Creek Watershed (Best Management Practices Implementation)
Idaho	Idaho Gold Corporation	American River Habitat Improvement
	University of Idaho	Riparian Policy Analysis
	Agriculture Research Service	Riparian-Wetland Bibliography
Montana	Montana Riparian Association	Statewide riparian classification effort
	Department of Agriculture, District and State Department of Lands	Cherry Creek Water quality improvement
Nevada	National Wild Horse Association	Bird Spring and Grapevine Spring Exclosures Maintenance
New Mexico	State Department of Game and Fish	Black River Biological inventory
Oregon	Department of Fish and Wildlife	North Pueblo Slough project development
Washington	The Nature Conservancy	Rock Creek Botanical Survey
Wyoming	State Dept. of Game and Fish	Springer/Bump-Sullivan Habitat Enhancement
	State Dept. of Game and Fish	North Fork Powder River

Future Challenges

The Riparian-Wetland Initiative provides a blueprint for responding to concerns raised in a 1988 GAO report, "Public Rangelands—Some Riparian Areas Restored but Widespread Improvement Will be Slow." The GAO reported that few areas were being maintained in proper functioning condition, although it found no technical barriers to improvement. It cited lack of staffing and improper livestock management practices as contributing to the problem.

Recent accomplishments in riparian management partially satisfy these concerns, and meet legislated mandates, such as controlling nonpoint sources of pollution, protection of threatened and endangered species, and species diversity. Still needing attention are ecological site inventories to establish riparian conditions and trends, activity plans to improve riparian areas, water rights, monitoring, and project de-

Because riparian-wetland ecosystems do not begin or end at landownership boundaries, a cooperative management effort is absolutely essential.

velopment to improve certain riparian areas and maintain existing investments. It is estimated that approximately \$17 million is required annually to fully implement the *Riparian-Wetland Initiative*.

Specific problems and impediments to full implementation are addressed below:

- In many areas, the general public is still very much unaware of the importance of maintaining riparian areas in good condition. The public can play a crucial role in the BLM's efforts. Therefore, there is a need for increased public outreach products, such as brochures, interpretive exhibits, and educational materials, and for more volunteer participation and cooperative agreements and partnerships to assist in financing high priority joint ventures.



Migratory waterfowl benefiting from water and cover in a healthy riparian area

- Many existing land use and activity plans need to be amended to accommodate riparian-wetland considerations.
- Many specially designated areas are in need of resource inventory. These areas include the San Pedro River, Aravaipa Canyon and Gila Box in Arizona; King Range, Dos Palmos and Carrizo Plains in California; and Warner Wetlands and Steens Mountains in Oregon. These areas could also benefit from mutually beneficial land transactions, increased presence on the ground, and land use planning evaluations. Additionally, over 1,600 projects need to be developed to improve and protect Congressionally mandated riparian-wetland areas.
- There is a backlog of maintenance on over 2,500 existing projects.
- More research and scientific data is required to better manage and restore riparian-wetland areas.
- About 2,120 allotment management plans (78 percent) need to be revised and implemented to address riparian-wetland issues. This was done successfully in showcase areas such as Oregon, Colorado, Wyoming, Idaho, and Arizona, proving that riparian areas can be restored with proper livestock grazing prescriptions.

The *Riparian-Wetland Initiative for the 1990's* prescribes goals for restoring 75 percent of riparian-wetland areas to proper functioning condition by 1997. Meeting this national goal and responding to the challenges presented in this report will require a major commitment from the Congress, the BLM, and BLM's partners. With this support, the BLM can succeed in achievement of healthy riparian-wetland areas on the public lands throughout the West.



(Right) Bear Creek, Oregon, before riparian management (1976).

(Below) Bear Creek after implementation of riparian management (1986).



BLM's Riparian Area Management Policy

The BLM Director signed a Riparian Area Management Policy in January 1987 which stressed the interdisciplinary, multi-resource approach to riparian area management.

The BLM will, to the extent practical, maintain, restore, or improve riparian values to achieve a healthy and proper functioning condition for maximum long-term benefits. It is the BLM's policy to:

- Conduct and maintain an inventory of all riparian areas, quantifying physical and biological condition and potential.
- Achieve riparian area improvement and maintenance objectives through the management of existing and future uses wherever feasible.
- Ensure that new resource management and activity plans, and existing plans when revised, recognize the importance of riparian values, and initiate management to maintain, restore, improve or expand them.
- Prescribe management for riparian values that is based upon site-specific characteristics and settings.
- Give special attention to monitoring and evaluating management activities in riparian areas and revise management practices where site-specific objectives are not being met.
- Cooperate with, and encourage the involvement of, interested Federal, State, and local governments and private parties to share information, implement management, coordinate activities, and provide education on the value, productivity, and management of riparian areas.
- Retain riparian areas in public ownership unless disposal would be in the public interest, and acquire riparian areas as determined in the land use planning system.
- Identify, encourage, and support research and studies needed to ensure that riparian area management objectives can be properly defined and met.

BLM Offices Around the Country

Bureau of Land Management
Department of the Interior
1849 C Street, NW
Washington, D.C. 20240
(202) 208-5717

BLM Service Center
Denver Federal Center—Bldg. 50
Denver, CO 80225-0047
(303) 236-6452

Phoenix Training Center
5050 N. 19th Avenue
Suite 300
Phoenix, AZ 85015
(602) 640-2651

BLM State Offices

Alaska State Office
222 West 7th Avenue, #13
Anchorage, AK 99513-7599
(907) 271-5555

Montana State Office
222 North 32nd Street
Billings, MT 59107
(406) 255-2913

Arizona State Office
3707 North 7th Street
Phoenix, AZ 85011
(602) 640-5504

Nevada State Office
850 Harvard Way
Reno, NV 89520
(702) 785-6586

California State Office
2800 Cottage Way, E-2841
Sacramento, CA 95825
(916) 978-4746

New Mexico State Office
1474 Rodeo Rd.
Santa Fe, NM 87505
(505) 438-7400

Colorado State Office
2850 Youngfield Street
Lakewood, CO 80215
(303) 239-3667

Oregon State Office
1300 NE 44th Avenue
Portland, OR 97213
(503) 280-7287

Eastern States Office
350 South Pickett Street
Alexandria, VA 22304
(703) 461-1365

Utah State Office
324 South State Street
Salt Lake City, UT 84111-2303
(801) 539-4021

Idaho State Office
3380 Americana Terrace
Boise, ID 83706
(208) 384-3014

Wyoming State Office
PO Box 1828
2515 Warren Avenue
Cheyenne, WY 82003
(307) 775-6011

